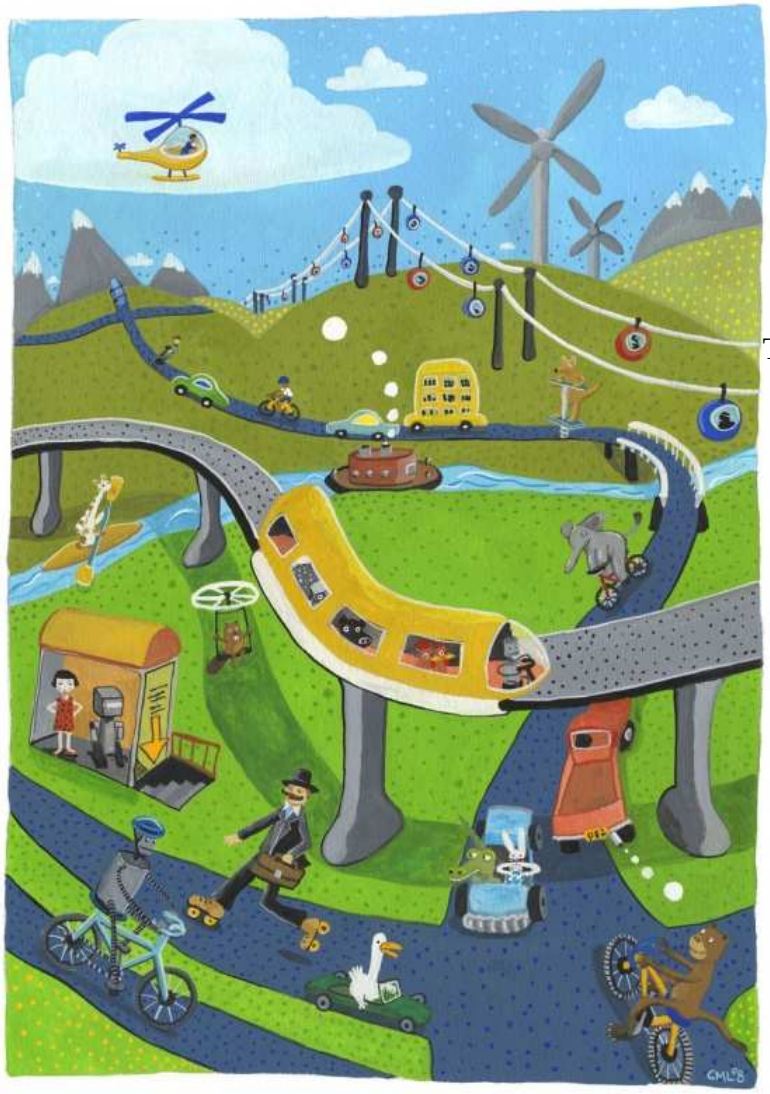
BCS MPO

BRYAN/COLLEGE STATION METROPOLITAN PLANNING ORGANIZATION

2010-2035
Metropolitan Transportation Plan



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Participating Agencies
Brazos County
City of Bryan
City of College Station
Texas A&M University
Texas Department of Transportation
The District

In Cooperation with
Federal Highway Administration
Federal Transit Administration

Approved by the Policy Committee

December 2, 2009

Preface

The Bryan/College Station Metropolitan Planning Organization has prepared this plan in compliance with the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) which was enacted on August 10, 2005. The preparation of this plan has been funded in part by the Federal Highway Administration, the Federal Transit Administration and the Texas Department of Transportation.

The contents of this report reflect the view of the authors who are responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official view or policies of the Federal Highway Administration, Federal Transit Administration or the Texas Department of Transportation.

For more information regarding this Plan Update, the Metropolitan Planning Organization and its activities or for a copy of this report, please contact:

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Vice-Chair

The Honorable Ben White	Mayor, City of College Station

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The Honorable Randy Sims	County Judge, Brazos County
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Chair

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Mr. Dale Picha	City of Bryan
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Special thanks to:

The Honorable John Cornyn, U.S. Senator
The Honorable Kay Bailey Hutchison, U.S. Senator
The Honorable Chet Edwards, U.S. House of Representative
The Honorable Steve Ogden, Texas State Senator
The Honorable Fred Brown, Texas House of Representative

Mr. Cary Karnstadt, TxDOT, Transportation Planning and Programming
Ms. Theresa Claxton, Federal Highway Administration

Bryan-College Station Metropolitan Planning Organization
Policy Committee

RESOLUTION 2010-02

A RESOLUTION TO APPROVE THE MPO'S FINAL 2010-2035 METROPOLITAN TRANSPORTATION PLAN (MTP).

WHEREAS, the Bryan-College Station Metropolitan Planning Organization's Policy Committee, (the Policy Committee) is the transportation planning decision-making body for the Bryan-College Station/Brazos County planning area, as designated by the Governor of Texas in accordance with federal law; and

WHEREAS, the Policy Committee is charged with the responsibility of preparing a Metropolitan Transportation Plan, a twenty year plan of transportation system improvements in Brazos County; and

WHEREAS, the last MTP was approved by the Policy Committee on December 15, 2004; and

WHEREAS, at the last PC meeting, the *draft* document was released to the public for a 30-day review period, ending November 19th, and

WHEREAS, comments were received and were addressed with the TAC through email on November 24, 2009 and appropriate changes were made to the document where applicable, and

WHEREAS, the Technical Advisory Committee recommended on November 25, 2009 that the MTP be forwarded to and approved by the Policy Committee; and

NOW THEREFORE, be it resolved by the Bryan-College Station Metropolitan Planning Organization Policy Committee;

1.

THAT, the FINAL 2010-2035 Metropolitan Transportation Plan (MTP), is hereby approved.

2.

THAT, this resolution becomes effective immediately upon adoption.

DONE AND APPROVED, this 2rd day of December, 2009.

Mayor D. Mark Conlee, Chairman
Bryan-College Station MPO, Policy Committee

POLICY COMMITTEE VOTE:

Mayor D. Mark Conlee: Aye Chair

Mayor Ben White: Aye Vice-Chair

Judge Randy Sims : absent Member

Mr. Charles Sippial, Sr.: Aye Member

Ms. Catherine Hejl: Aye Member

MOVED BY: Catherine Hejl

SECONDED BY: Mayor White

ATTEST: Susan Kalkhoff

Acronyms

ADA	Americans with Disabilities Act
ARRA	American Recovery & Reinvestment Act
BCDEM	Brazos County Department of Emergency Management
BTD	Brazos Transit District, also known as The District
BVCOG	Brazos Valley Council of Governments
CAC	Citizens Advisory Committee
EJ	Environmental Justice
FHWA	Federal Highway Administration
FM	Farm to Market Road
FTA	Federal Transit Administration
GIS	Geographic Information Systems
ITS	Intelligent Transportation Systems
LOS	Level of Service
MPO	Metropolitan Planning Organization
MTP	Metropolitan Transportation Plan
ROW	Right-of-Way
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SDC	State Data Center
SH	State Highway
TAC	Technical Advisory Committee
TAZ	Traffic Analysis Zones
TDM	Transportation Demand Management
THSRTC	Texas High Speed Rail and Transportation Cooperation
TIP	Transportation Improvement Program
TTI	Texas Transportation Institute
TxDOT	Texas Department of Transportation
UP	Union Pacific Railroad
UPWP	Unified Planning Work Program

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1.0 Introduction

1.1 What is the Metropolitan Planning Organization?

The US Census Bureau has identified over 400 regions throughout the United States that they consider to be urbanized. Urban Areas, by definition, contain a population greater than 50,000. Federal law mandates the creation of a Metropolitan Planning Organization (MPO) for each census defined urbanized area, with the purpose of involving local governments in transportation decisions involving federal highway or transit funds.

To achieve this, the Bryan/College Station Metropolitan Planning Organization (MPO) has been designated by the Governor of Texas as the agency responsible for transportation planning for Brazos County. The MPO Planning Staff organizes, researches, and coordinates activities among transportation-related stakeholders and the MPO Policy Committee.

The MPO is governed by a Policy Committee which consists of five members representing Brazos County, City of Bryan, City of College Station, Texas A&M University (TAMU) and the Texas Department of Transportation (TxDOT). The Policy Committee is the decision-making component of the MPO and their duties include adopting metropolitan transportation policy and determining regional transportation priorities.

In addition to the Policy Committee, there is a Technical Advisory Committee composed of engineering, planning, and other technical professionals from member governments, the transit authority, TxDOT engineers, MPO staff, and other transportation interests. The Technical Advisory Committee, along with the MPO Staff, provide the Policy Committee with the technical assistance necessary for the decision making process.

1.2 What is the Metropolitan Transportation Plan?

The MPO's Metropolitan Transportation Plan (MTP) is the 25-year plan that outlines the transportation needs for Brazos County, including the Bryan/College Station Metropolitan Area. This plan then identifies specific projects to address those needs. The MTP, required by federal law, is designed as the guideline from which all future multimodal projects are constructed within Brazos County over the next 25-year period.

Once identified within the MTP, a project is then eligible for federal highway or transit dollars for study, design, right-of-way acquisition or construction activities. Before proceeding to construction or implementation, however, the project must first be included in the Transportation Improvement Program (TIP). The TIP identifies those projects that the MPO agrees should either be implemented or constructed within the next 3 fiscal years.

The MTP is the final product of several years of research through the continuing, comprehensive, cooperative effort of the MPO Policy Board, MPO Technical Committee, MPO Staff, TxDOT, transportation-related stakeholders, and the public. The MTP considers current and future transportation needs in Brazos County. A travel demand model is in the process of being completed in the next year and will be used for an interim update of the MTP when that information becomes available.

1.3 MTP Goals

The MTP is a long-range plan that outlines how the transportation system and services will provide for the mobility and accessibility of people and freight within and through the region. The goals of the MTP are listed below:

1. Enhance safety & security of the transportation system.
2. Reduce congestion & improve mobility.
3. Provide multimodal transportation options.
4. Maintain, preserve & improve the existing transportation system.
5. Support economic development opportunities.

1.4 Planning Factors

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) continues use of statewide transportation planning factors that were originally established in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and consolidated into seven general categories under the Transportation Equity Act for the 21st Century (TEA-21), but SAFETEA-LU separated safety and security and expanded environmental and energy conservation to create the following eight factors:

"Each State shall carry out a transportation planning process that provides for consideration and implementation of projects, strategies and services that will address the following factors:

1. Support the economic vitality of the United States, the States, and metropolitan areas, and non-metropolitan areas especially by enabling global competitiveness, productivity, and efficiency;

2. Increase the safety of the transportation system for motorized and nonmotorized users;

3. Increase the security of the transportation system for motorized and nonmotorized users;

4. Increase accessibility and mobility of people and freight;

5. Protect and enhance the environment, promote energy conservation, and improve quality of life, and promote the consistency between transportation improvements and State and local planned growth and economic development patterns;

6. Enhance the integration and connectivity of the transportation system, across and between modes throughout the State, for people and freight;

7. Promote efficient system management and operation; and

8. Emphasize the preservation of the existing transportation system."

The chart below highlights how each of these factors is addressed in the 2010-2035 MTP.

SAFETEA-LU Planning Factor	MPO MTP Goals Met
1. Support the economic vitality of the United States, the States, and metropolitan areas, and non-metropolitan areas especially by enabling global competitiveness, productivity, and efficiency.	All five of the Plan's goals support this planning factor.
2. Increase the safety of the transportation system for motorized and nonmotorized users.	Goal 1, Enhance safety & security of the transportation system
3. Increase the security of the transportation system for motorized and nonmotorized users.	Goal 1, Enhance safety & security of the transportation system
4. Increase the accessibility and mobility of people and freight.	Goal 2, Reduce congestion & improve mobility Goal 3, Provide multimodal transportation options
5. Protect and enhance the environment, promote energy conservation, improve quality of life, and promote the consistency between transportation improvements and State and local planned growth and economic development patterns.	Goal 2, Reduce congestion & improve mobility Goal 5, Support economic development opportunities
6. Enhance the integration and connectivity of the transportation system, across and between modes throughout the State, for people and freight.	Goal 3, Provide multimodal transportation options Goal 4, Maintain, preserve & improve the existing transportation system
7. Promote efficient system management and operation.	Goal 4, Maintain, preserve & improve the existing transportation system
8. Emphasize the preservation of the existing transportation system.	Goal 4, Maintain, preserve & improve the existing transportation system

1.5 Geography

Bryan/College Station is located in Brazos County in east central Texas, about 140 miles north of the Gulf of Mexico. The nearest interstate is Interstate Highway 45 (38 miles). Bordered by the Brazos and Navasota Rivers, the average elevation is 300 feet above sea level.

Brazos County, as identified by the US Census Bureau, encompasses 586 square miles and has an estimated population of 175,122, as of the year 2008. Brazos County is bounded on all sides by large metropolitan areas; Dallas-Ft. Worth is 180 miles to the north, Houston 95 miles to the southeast, Austin 104 miles to the west, and San Antonio 166 miles to the southwest.

1.6 Economic Assumptions

Brazos County continues to grow at a steady pace. Brazos County has shown a consistent increase in population and economic activity immediately to the east, west, and south of the Bryan and College Station municipalities. This trend is expected to continue based upon recent city annexations, labor force trends, household income, sales per capita, total sales, and population growth.

1.7 Air Quality Considerations

The Clean Air Act Amendments of 1990 requires all metropolitan areas to meet the National Ambient Air Quality Standards established by the Environmental Protection Agency (EPA) for numerous pollutants, including ozone, nitrous oxides, and particulate matter. Metropolitan areas that meet these standards are considered to be in attainment and are not required to establish control measures to improve air quality. If the MPO represents a non-attainment area, then it is required to show mitigation measures and programs that will bring the region back into air quality conformity. Brazos County, including the Metropolitan Areas of Bryan and College Station are considered to be in attainment for all air pollutants by the EPA.

1.8 Environmental Mitigation

SAFETEA-LU includes requirements above and beyond the previous Transportation Bills under which MPO's have had to operate. One such requirement is for MTPs to include a generalized discussion of potential environmental mitigation activities and potential area, including activities that may have creates potential. SAFETEA-LU further requires that the discussion should be developed in consultation with Federal, State and Tribal Wildlife, Land Management and Regulatory Agencies.

Development of the MTP in Brazos County is the responsibility of the MPO. This process is a collaborative effort between the MPO, it's member governments, TXDOT and other public and private organizations. During the development of the MTP, the MPO examines demographic patterns, growth trends and travel patterns in order to identify existing transportation issue areas as well as problems that could potentially develop in the future. The MPO then cooperatively identifies projects to meet current and projected future demands that will provide a safe and efficient transportation system that meets the needs of the traveling public while limiting adverse impacts to the environment. Because this phase of the planning process is preliminary, detailed environmental analysis of each project as required by the National Environmental Policy Act (NEPA) is not necessary for long-range transportation plans. Because the MPO Region meets the National Ambient Air-Quality Standards for all airborne pollutants a demonstration of air quality conformity is not necessary.

While more detailed environmental analysis is not part of the MTP process, environmental analysis of individual projects does occur during the project process. It is during the project development process that the project scope and features are defined making the detailed environmental analysis possible, leading to the formulation of environmental impact mitigation strategies for the project. In Texas the environmental mitigation process is directed by the TXDOT Environmental Manual. TxDOT's Environmental Manual directs the project-by-project interagency review, study, and identification of environmental concerns. Related requirements that typically apply at this stage involve public hearings, environmental permit processing, and NEPA studies. Usually, a variety of environmental documentation, permit, and mitigation needs are identified and environmental findings are closely considered and evaluated. Common project environmental mitigation measures (required silt-fence barriers, precautions to control dust, etc) are managed using TxDOT's Roadway Design Manual, AASHTO's Standard Specifications for Highway Bridges, TxDOT's Standard Specification for Construction of Highways, Streets, and Bridges that apply to all construction activities. Special environmental concerns, however, may

differ widely by project and location. As environmental studies are conducted and undergo public and interagency review, needed mitigation plans are specified and committed to within the environmental documents on the particular transportation project or activity. Environmental management systems then are used to monitor, and ensure compliance with, the environmental mitigation commitments.

Because the MTP development process requires interagency coordination and cooperation, it is important to consult with environmental resource agencies during the development of a long-range transportation plan. This interagency consultation provides an opportunity to compare transportation plans with environmental resource plans, develop a discussion on potential environmental mitigation activities, areas to provide the mitigation, and activities that may have the greatest potential to restore and maintain the environment.

Potential environmental mitigation activities may include: avoiding impacts altogether, minimizing a proposed activity/project size or its involvement, rectifying impacts (restoring temporary impacts), precautionary and/or abatement measures to reduce construction impacts, employing special features or operational management measures to reduce impacts, and/or compensating for environmental impacts by providing suitable, replacement or substitute environmental resources of equivalent or greater value, on or off-site. Where on-site mitigation areas are not reasonable or sufficient, relatively large off-site compensatory natural resource mitigation areas generally may be preferable, if available. These may offer greater mitigation potential with respect to planning, buffer protection, and providing multiple environmental habitat value (example: wetland, plant, and wildlife banks).

Mitigation activities and the mitigation areas will be consistent with legal and regulatory requirements relating to the human and natural environment. These may pertain to neighborhoods and communities, homes and businesses, cultural resources, parks and recreation areas, wetlands and other water sources, forested and other natural areas, agricultural areas, endangered and threatened species, and the ambient air. The table below illustrates some potential mitigation activities for a cross-section of Resources:

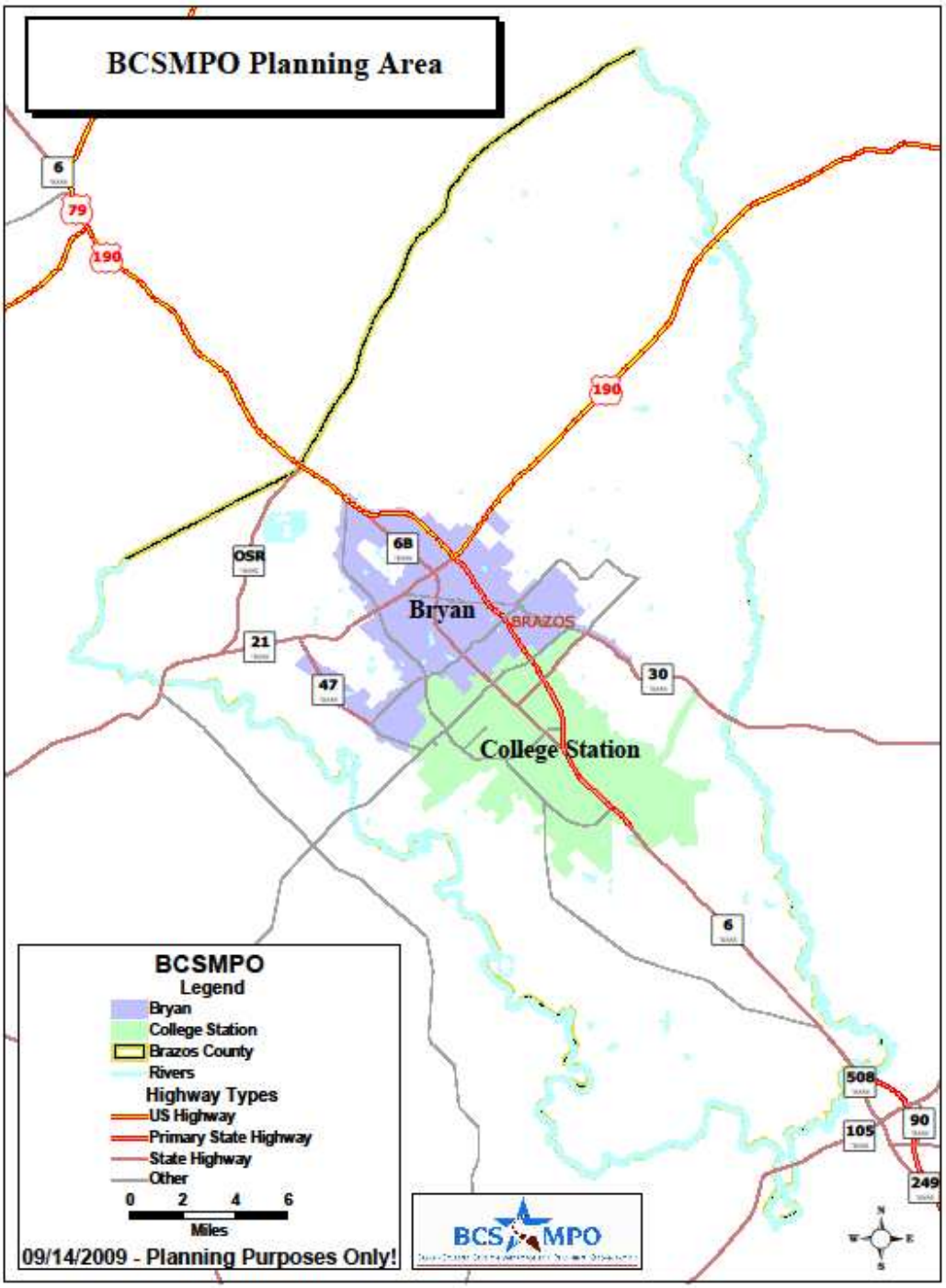
Resource	Potential Mitigation Activities
Wetlands and Water Resources	Avoid rivers, creeks and other waterways to protect water quality as well as reviewing areas where wetland/stream restoration, enhancement or creation can occur
Floodplain	Avoid or minimize adverse effects to ecological area through the preservation of land for parks and trails. Establish and use a regional approach to land preservations if direct preservation of a specific resource is not reasonably feasible. Avoid and minimize adverse impacts through project alignment and design.
Wildlife Habitat	Avoid or minimize adverse effects to ecological area through the preservation of wildlife habitats. Establish and use a regional approach to land preservations if direct preservation of a specific resource is not reasonably feasible. Avoid and minimize adverse impacts through project alignment and design.

Threatened and Endangered Species	Avoid or minimize adverse effects to ecological area through the preservation of threatened and endangered wildlife. Establish and use a regional approach to land preservations if direct preservation of a specific resource is not reasonably feasible. Avoid and minimize adverse impacts through project alignment and design.
Agricultural Land	Avoid or minimize adverse effects to ecological area through the preservation of agriculture land and open space. Establish and use a regional approach to land preservations if direct preservation of a specific resource is not reasonably feasible. Avoid and minimize adverse impacts through project alignment and design.
Forested and Other Natural Areas	Avoid or minimize adverse effects to forested areas through landscaping within existing right-of-way, Replacement property for open space easements, replacement of forest lands within existing easements; design exceptions and variances.
Parks and Recreation Areas	Avoid or minimize impacts to parks and recreation areas through design exceptions and variances, on-site screening of facilities, replacement of affected property.
Environmental Justice	Avoid or minimize adverse effects through project alignment and design. Implement other transportation projects or programs that correct or minimize impacts.
Ambient Air Quality	Transportation control measures, transportation emission reduction measures.

1.9 Safety/Security Dialogue

The Brazos County Department of Emergency Management operates a comprehensive, risk-based emergency management program of mitigation, preparedness, response, and recovery. The MPO was a partner in the development of the 2006 Interjurisdictional Emergency Plan to protect the citizens of Brazos County. The plan addresses incidences of fires, flooding, tornadoes, energy/fuel shortage, water system failure, electric system failure, droughts, hurricanes, winter storms, Hazmat spills, civil disorder and terrorism.

The Emergency Management Plan outlines the approach to emergency operations, and is applicable to the County and Cities. It provides general guidance for emergency management activities and an overview of the methods of mitigation, preparedness, response, and recovery. State law provides a county judge or mayor with the authority to order the evacuation of all or part of the population from a stricken or threatened area within their respective jurisdictions. The Incident Commander (County Judge and/or Mayor) or, for large-scale evacuations, the Emergency Operations Center (EOC) shall assess the need for evacuation, plan evacuations, and coordinate support for the evacuation effort. Potential Evacuation Areas are listed in Appendix 2 to Annex E of the Brazos County Interjurisdictional Emergency Plan. Those areas listed include the Brazos River Floodplain, the Navasota River Floodplain, the Honeywell Facility and TAMU.


BCSMPO Planning Area
6
79
190
190
OSR
68
Bryan
BRAZOS
21
47
30
College Station
6
508
105
90
249
BCSMPO
Legend
Bryan
College Station
Brazos County
Rivers
Highway Types
US Highway
Primary State Highway
State Highway
Other
0 2 4 6
Miles
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BCS MPO

2.0 Demographics

2.1 Historical & Current Populations

Brazos County experienced a 25% increase in population between 1990 and 2000 (or 2.5% *annual* growth rate). By comparison, for those same years, that increase is almost double the national average growth rate of 13.2% and was higher than the State of Texas average growth rate of 22.8%. From 2000 to 2008, the US Census Bureau estimates that Brazos County added another 19,707 people.

2.2 Population Forecasts

According to the Texas State Data Center, Brazos County is expected to add 43,773 new residents between the years 2010 to 2035; a 25% growth, using the 2000-2007 Scenario (or 1.0% annual growth rate).

In the 2035 population forecast, populated urban growth continues its gradual expansion in an east/west direction while a much larger expansion flows south along State Highway 6.

Projected Population Scenarios for Brazos County

Year	Scenario 0.0	Scenario 0.5	Scenario 1.0	Scenario 2000-2007
2000	152,415	152,415	152,415	152,415
2005	157,028	161,122	165,349	163,349
2010	163,534	171,830	180,345	**175,512**
2015	169,534	182,547	195,129	187,217
2020	174,661	192,688	209,440	198,009
2025	178,759	201,852	222,573	206,874
2030	181,970	210,132	234,159	213,656
2035	184,580	217,870	244,871	**219,285**

Source: Texas State Data Center, 2008 Population Projections

The Texas State Demographer develops various scenarios of population growth for Counties and Metropolitan areas:

The Zero Migration (0.0) Scenario

The zero scenario is a scenario which assumes that inmigration and outmigration are equal (i.e., net migration is zero) resulting in growth only through natural increase (the excess or deficit of births relative to deaths). This scenario is commonly used as a base in population projections and is useful in indicating what an area's indigenous growth (growth due only to natural increase) will be over time. In general, this scenario produces the lowest population projection for counties with historical patterns of population growth through net inmigration and the highest population projection for counties with historical patterns of population decline through net outmigration.

The One-Half 1990-2000 Migration (0.5) Scenario

This scenario has been prepared as an approximate average of the zero (0.0) and 1990-2000 (1.0) scenarios. It assumes rates of net migration one-half of those of the 1990s. The reason for including this scenario is that many counties in the State are unlikely to continue to experience the overall levels of relative extensive growth of the 1990s. A scenario which projects rates of population growth that are approximately an average of the zero and the 1990 2000 scenarios is one that suggests slower than 1990-2000 but steady growth.

The 1990-2000 Migration (1.0) Scenario

The 1990-2000 scenario assumes that the trends in the age, sex and race/ethnicity net migration rates of the 1990s will characterize those occurring in the future of Texas. The 1990s was a period characterized by rapid growth. It is seen here as the high growth alternative because its overall total decade pattern is one of substantial growth (i.e., 22.8% for the 1990-2000 decade for the State). Because growth was so extensive during the 1990s it is likely to be unsustainable over time and thus this scenario is presented here as a high growth alternative. For counties that experienced net outmigration during the 1990s, this scenario produces continued decline.

The 2000-2004 Migration Scenario

The 2000-2004 migration scenario was produced in 2006 and takes account of migration trends between 2000-2004. Because migration in the 2000-2007 period was influenced by the one-time event of substantially elevated migration after Hurricane Katrina struck the Central Gulf Coast in 2005, The Office of the State Demographer has decided to retain the 2000-2004 migration scenario as an alternative to the 2000-2007 scenario that may more accurately convey trends in the state and in impacted counties in the first decade in the century. An analysis of substantial differences between the two scenarios will be posted on this website shortly.

The 2000-2007 Migration Scenario

The 2000-2007 projection scenario provides a scenario that takes into account post-2000 population trends. In the State overall and in some counties the post-2000 period has resulted in reduced levels of net migration. In other counties post-2000 net migration rates have been greater than those of the 1990s. Under this scenario the 2000-2007 age, sex and race/ethnicity specific migration rates are assumed to prevail from 2000 through 2040. This scenario allows those users who believe that the 2000-2007 period has produced fundamental long-term changes in population patterns to ascertain the likely future size and characteristics of the population.

The 2000-2007 Migration Scenario was chosen because after a review of the current growth patterns in Brazos County, it was determined that this scenario reflected the most accurate observed growth since the 2000 Decennial Census. This will be reviewed during the next update of the MTP that will follow delivery of the MPO Travel Demand Model in the later half of 2010.

2.3 Title VI Issues

A primary goal of the MPO is to ensure that the transportation needs of all people are met and that no one population group must endure a disproportional share of the burdens in meeting those needs. In order to accomplish this goal, the MPO performs an analysis of its plans and programs in order to assess the mobility of traditionally underrepresented groups and to provide an assessment of the impacts of proposed projects upon these groups. The following sections quantify the traditionally underrepresented groups and describe their distribution within Brazos County. Specific analysis regarding the mobility of these groups, and plan recommendations to improve their mobility, can be found within the chapters dealing with each transportation mode.

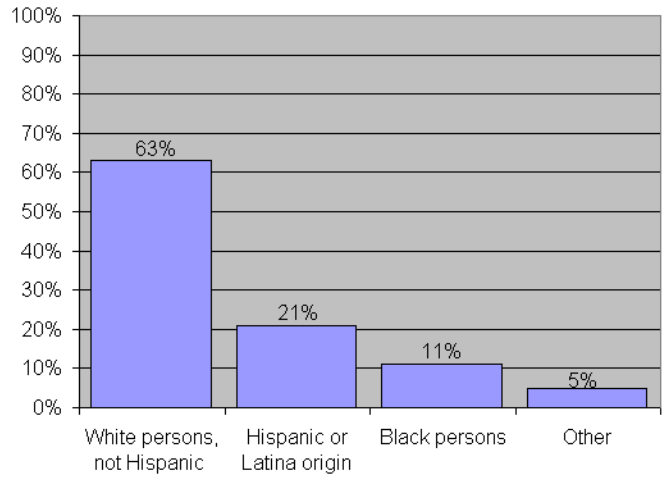
2.4 Race & Ethnicity

Minority populations within Brazos County are primarily represented by two people groups: Hispanics and Blacks, with 21% and 11% respectively.

Following trends that are unfolding across the U.S. the demographic makeup of Brazos County is undergoing significant change during the years encompassed by the MTP. Over the course of the planning horizon, the Black population is expected to remain relatively stable, comprising 11.1% of the population of Brazos County in 2035. The most significant increase in population will occur within the Hispanic population growing from 21% in 2008 to 38% of the county population in 2035. As the minority share of the population increases the Anglo share is expected to decrease to 41.3 % of the total county population.

The minority populations of Brazos County, like the minority populations in larger urban areas, are concentrated in the central parts of Bryan and College Station. As the urbanized area continues to grow outward, the proportion of Brazos County that is now urbanized will see a larger concentration of minority citizens. On the other hand, those areas of the county that are now urbanizing (and will be urbanized over the course of the planning horizon), will see a population that is largely Anglo.

Ethnicity in Brazos County, 2008



Source: US Census (numbers rounded)

2.5 Special Populations

2.5.1 Persons Living in Poverty

Brazos County is far above the state average for persons living below the census defined poverty level. This can be attributed, in large part, to the presence of both Blinn College and TAMU and the students associated with them. These students fill many of the part-time service and retail jobs that are available in Bryan/College Station. Most of these jobs, while necessary, tend to be minimum wage jobs with a limited number of hours per week. This creates a situation in which the number of persons living below the poverty line in Brazos County is artificially high.

Income & Poverty Statistics, 2007		
	Brazos County	Texas
Median household income	$38,039	$47,563
Per capita income	$26,147	$37,083
Persons below poverty, percent	26.2%	16.3%
Source: US Census, American Community Survey, 2007		

For those areas of Bryan/College Station that do experience real poverty conditions, the poverty

areas generally correlate well with a lack of access to automobiles. As income decreases, the ability to afford an automobile also decreases. The result is that these areas are more heavily dependant upon public transportation and bicycle/pedestrian facilities than other segments of the population.

Median Household Income can be a better measure of household income within a specified geographic area than Average Household Income because it ignores the effects of unusually high or low incomes. It divides the population into two equal groups: those that make more than the median value and those that make less than the median value. Median Household Income has been slowly declining in Brazos County since the 2000 Decennial Census. This trend is expected to continue as the minority share of the total population continues to increase. By 2035 the current Median Household Income of $38,038 is expected to decrease to $33,656.

Per Capita Income is a good measure of the total wealth of a specified geographic area and therefore it can be used as a comparison between geographic units. To calculate Per Capita Income, the total income for the area is divided by the total population within the area. Therefore the Per Capita Income tells us what each person in the area would receive if all of the income in the region were divided equally among the population. Growth of Per Capita Income in Brazos County lags slightly behind that of the State of Texas. Since 1989 Per Capita Income in Brazos County has grown at about 10.2% per year. Over the same time period the state as a whole has experienced a growth rate of 10.5% per year.

2.5.2 Older Populations

In 2007, Brazos County was home to approximately 12,592 residents, aged 65 or over.

Persons 65 years and over		
	Brazos County	Texas
2000	6.7%	9.9%
2008	7.5%	10.2%
2035	11.7%	
Source: US Census, American Community Survey		

Brazos County is an attractive community for residents over 65; not only are the low cost of living, tax freezes and recreational opportunities an advantage, but also the wide array of medical services which are available locally. It is expected that by the year 2035 the proportion of the population over 65 will reach almost 12% (11.7%), up from 7.5% in 2008, which is reflected by the current population aging as well as substantial in-migration of older populations.

2.5.3 Student Populations

Blinn Community College operates campuses in several locations. The main campus is located in Brenham, while the largest campus, by far, is located in Bryan. The Texas Higher Education Board reports only system-wide enrollment for Blinn College, which in 2006 stood at 14,016. This data predicts that system-wide enrollment at Blinn College grew at about 6% - 7% per year between 2000 and 2008 and by the year 2020 will reach 15,680. Data obtained from the Blinn Community College Campus in Bryan shows that while TAMU enrollment has been growing at about 2% per year, enrollment at the

Local College and University Enrollment, Fall Semester					
School	**2004**	**2005**	**2006**	**2007**	**2008**
Blinn College, Brazos County	10,421	10,535	10,189	10,563	11,408
Texas A&M University	44,435	44,578	45,380	46,542	48,039
Source: Texas Higher Education Coordinating Board					

Blinn College Bryan campus has averaged about 10,350 between 2003 and 2006. Unless the campus expands, this figure will likely not change in the foreseeable future.

TAMU is by far the region's largest university, with 48,039 students enrolled for the 2008-2009 academic year, and more than 21,000 employees. TAMU offers more than 120 undergraduate degree programs and 240 graduate programs. TAMU's agriculture, engineering, business and veterinary programs are among the most highly rated. TAMU has a profound economic effect on the region. A 2007 study, by the Texas Comptroller's Office, estimates TAMU's's direct economic impact on Brazos County at $1.1 billion in 2006 alone. TAMU continues to grow, showing an 8% increase in enrollment from 2007 to 2008.

Sources providing future growth information for TAMU are contradictory. The Texas Higher Education Board provides enrollment projections for state universities through the year 2020. According to these projections TAMU enrollment is expected to remain steady at 48,000 students. However the Texas A&M Master Plan provides for a significant rate of growth into the future. It is not unrealistic to expect enrollment at Texas A&M to continue to grow at a historical rate of approximately 2% per year. At this rate, total 2020 enrollment for TAMU can be expected to reach 58,500 students.

Public school enrollment in Bryan/College Station has maintained a steady growth rate of about 1.2% per year. As this growth rate continues into the future the projected 2035 public school enrollment will reach approximately 31,200.

Public School Enrollment

	2004	2005	2006	2007	2008
Bryan ISD & College Station ISD	21,549	21,712	22,149	22,357	22,603

Source: Brazos County, Comprehensive Annual Financial Report, For The Year Ended September 30, 2008

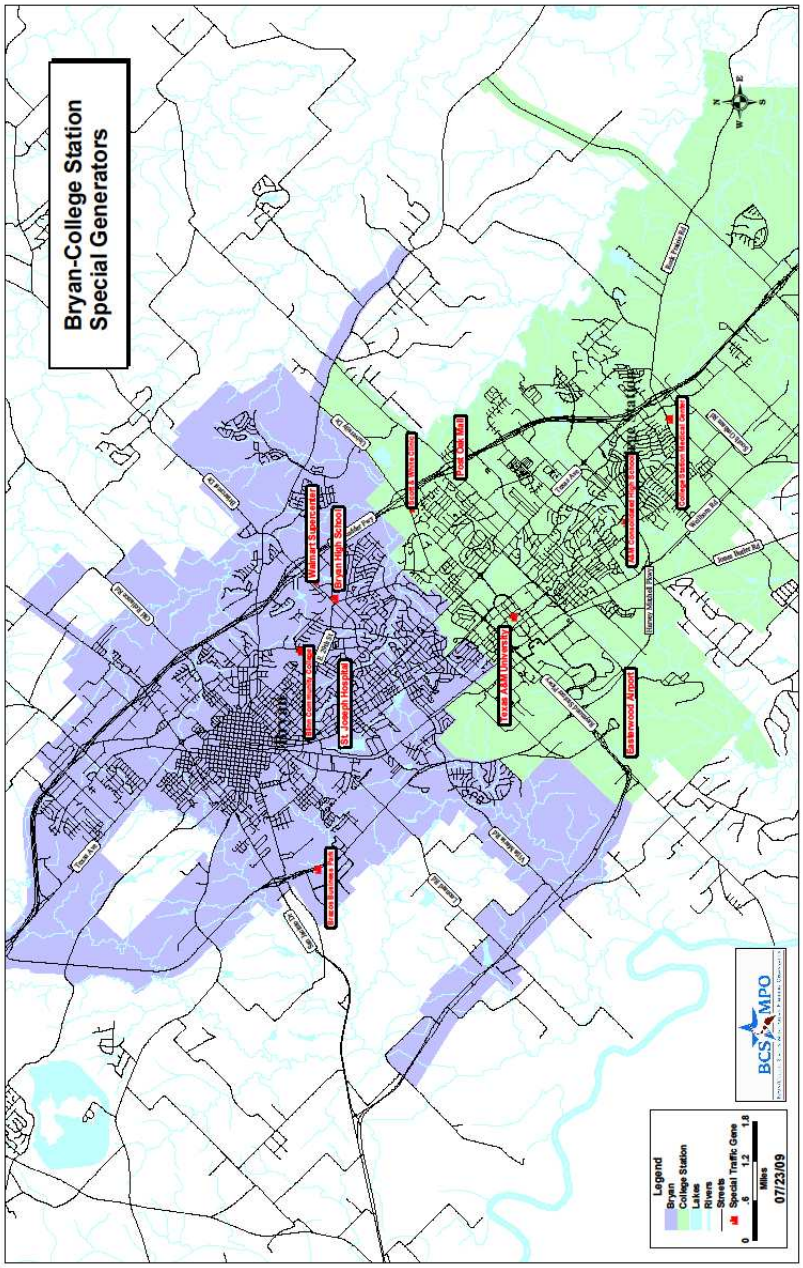
3.0 Workforce

The estimated labor force for 2000 within Brazos County was 86,234. Most employment is concentrated within the City of Bryan and City of College Station.

3.1 Special Generators

A special generator is a facility, business, industry or other land use that generates a large amount of traffic or exhibits unique trip patterns. Below is the list of the top Special Generators for Brazos County.

Special Generator	Notes
Brazos Business Park	Industrial Park, Freight and Truck related traffic
Blinn Community College	Community College, Enrollment = 10,186
St. Joseph Hospital	Hospital, 253 Beds
Bryan High School	Enrollment = 3,700
Walmart Supercenter	High Volume Shopping Center
Easterwood Airport	Generates off-peak trips
Texas A&M University	University, Enrollment = 48,039 (Fall, 2008)
Scott & White Clinic	High Volume Medical Facility
Post Oak Mall	Regional Shopping Mall
A&M Consolidated High School	Enrollment = 2,300
College Station Medical Center	Medical Facility, 150 Beds



3.2 Control Totals

When making forecasts of any kind, whether population or employment, there are many assumptions that one has to make. In the case of employment, one of these assumptions is how the mix of employment is going to change over the course of time. There are many different models that can be used to predict how employment will change, some are simple and some are complex. The problem with models is that they can ignore the uniqueness of a region. In the case of Brazos County we have one overriding factor that dominates the economic landscape and to a great degree dictates how employment within the county will grow and change. This overriding factor is TAMU. The presence of TAMU dictates that a certain level of Service and Retail employment will be needed to meet the needs of the students as-well-as the faculty and staff. The assumption made is that the amount and mix of Basic, Service and Retail employment that is present in 2006, is the amount and mix of these types of employment that are required to meet the needs of those associated with TAMU. Therefore control totals, or target amounts, for the three major categories of employment were developed based upon the proportions, or mix, of employment that was present in 2006. The results of applying these proportions result in the control totals that are shown in the chart below.

Control Totals for Brazos County

Demographic	2010	2035
Population	175,512	219,285
Household Size	2.08	2.6
Median Household Income	$38,039	$31,160
Basic Employment	18,075	22,898
Retail Employment	26,314	33,336
Service Employment	36,726	46,526
Total Employment	138,743	175,766

Source: Texas State Data Center, Workforce Commission & MPO

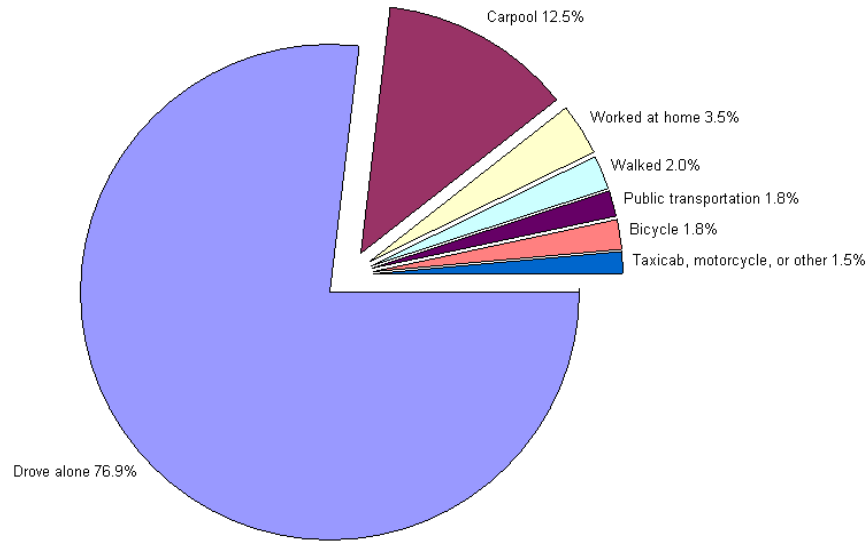
Over the 25 year planning horizon, the Median Household Income is expected to decrease slightly when measured in constant dollars. The major reasons for this are in part because of the increased number of college students associated with the colleges in Brazos County. The largest proportion of change will come from changes in the demographic makeup of Brazos County. Over time the number of minority households with the associated lower incomes and education levels will increase causing downward pressure on the income levels in Brazos County. The most optimistic scenario, given historical trends, is that if income levels do not decrease, they will remain relatively unchanged.

4.0 Roads & Highways

4.1 State of the System

In 2008, approximately 131,721 vehicles were registered. In 2007, Brazos County had 324 centerline miles of state maintained roads, according to the TxDOT, Bryan District website. The roadway system serving Brazos County is a mixture of urban and rural arterials, collectors and local streets.

The predominant form of transportation for individuals in Brazos County is by single-occupancy vehicle travel.



Source: US Census, American Community Survey, Community Characteristics, 2007

The following major roads cross through Brazos County:

Earl Rudder Freeway (SH 6)
Texas Avenue (Business 6)
Highway 21/US Highway 190 (SH 21)
Harvey Road (SH 30)
William D. Fitch Parkway (SH 40)
SH 47
Old San Antonio Road (SH OSR)
University Drive (FM 60)
Briarcrest Drive (FM 1179)
Sandy Point Road (FM 1687)
Wellborn Road (FM 2154)
George Bush Drive (FM 2347)
Harvey Mitchell Parkway (FM 2818)

4.1.1 Level-of-Service

Level-of-service, or LOS, is a measure used by transportation planners and engineers to describe how well a roadway or transportation facility is operating. Transportation planners tend to define LOS as the ratio of volume (the number of vehicles passing through the facility), to the maximum amount of vehicles that the facility can carry; the capacity. In other words, one way of defining LOS is as a measure of volume-to-capacity ratio.

LOS Definitions	
LOS	V/C Ratio
A	0.1
B	0.25
C	0.5
D	0.75
E	0.9
F	1.0

Traffic Engineers tend to think of LOS in much the same way, only they will add some measure of delay to their definition. LOS is most often given a letter designation of A through F, with LOS A denoting almost no traffic and LOS F denoting essentially gridlocked conditions. Using the ratio of volume-to-capacity is an easy way for non-transportation stakeholders to understand LOS. The LOS Definitions chart provides an easy rule-of-thumb guide.

4.1.2 Travel Time

Over the past several decades data collection efforts such as the U.S. Census, the American Community Survey and travel surveys taken at the local level all over the nation show that Americans are spending more and more time traveling to work. For example in 2000 the national mean travel time to work was 25.5 minutes. That figure represents an increase of over two minutes from 1990. The situation gets even worse in the larger metropolitan areas.

Average Travel Time to Work, 2007	
Less than 10 minutes	19.1%
10 to 14 minutes	25.9%
5 to 19 minutes	26.3%
20 to 24 minutes	13.6%
25 to 29 minutes	3.8%
30 to 34 minutes	5.4%
35 to 44 minutes	1.0%
45 to 59 minutes	2.3%
60 or more minutes	2.7%
Mean travel time to work (minutes)	16.8
Source: US Census, American Community Survey, 2007	

The situation in Brazos County is somewhat different. Data collected by the Census Bureau and the American Community survey shows that mean travel time to work has remained relatively stable throughout the last decade. In 2000 the mean travel time to work for Brazos County residents was 16.74 minutes. In 2007, the mean travel time to work was 16.8 minutes. While the 2007 figure shows little, if any, change over the 2000 measure, this situation cannot remain unchanged into the future. As Bryan and College Station continue to grow to the south and eastern portions of the county mean travel time to work will increase. This expected increase will be the result of both longer commutes and greater congestion.

4.1.3 Vehicle Availability

Understanding the availability of vehicles, and how vehicle availability changes over time, is useful in understanding household decisions about how people get to work or other activities. For example, between 1990 and 2000 there were 13.3 million new households added nationwide. At the same time 13.2 million workers were added to the workforce. During this same period of time over 26 million vehicles were added to the U.S. fleet of vehicles. What this says is that vehicles are being added to the national roadways at an increasing rate. In 2000, 40.5 percent of households had two vehicles available, and 18 percent of households had three or more vehicles available compared to just 10.0 and 1.3 percent in 1960 respectively.

Vehicles Available	2000		2008	
	Households	Percent	Households	Percent
No Vehicles	3,618	6.3%	3,799	6.0%
One Vehicle	19,979	34.9%	23,193	36.8%
Two Vehicles	22,332	39.0%	23,904	37.9%
Three Vehicles	6,952	12.2%	9,151	14.5%
Four or more Vehicles	2,321	4.1%	2,997	4.8%
Total	57,202	100.0%	63,044	100.0%

Source: 2000 Decennial Census and 2008 American Community Survey 1-Year Estimates

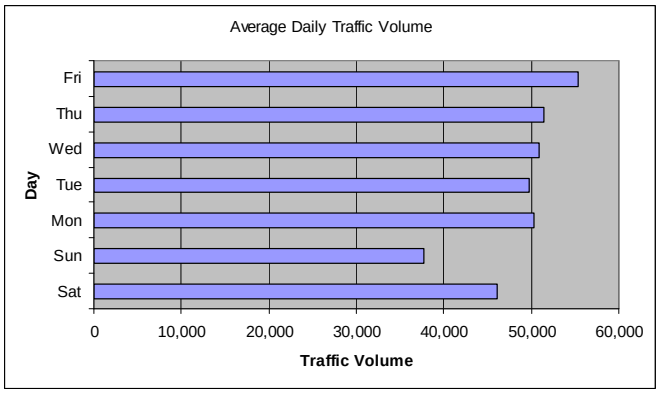
For Brazos County a similar situation exists. The Census Bureau began collecting American Community Survey data for Brazos County in 2005. At this time, the data shows that the number of no-car households is decreasing. There is also a trend away from the two-car

household in favor three-or-more vehicles. Again, more vehicles on the road leads to greater congestion and the possibility of future air quality issues.

4.1.4 SH 6 Traffic Volumes

There are many different types of traffic counts available to traffic engineers and transportation planners. Each type of count is designed to collect a different type traffic volume information. Yet they all have one thing in common. They provide the persons or organizations doing the study with a count of vehicles passing through a particular facility at a certain point in time. This allows planners and engineers to calculate growth rates in order to make projections about future traffic volumes. TXDOT has installed permanent traffic counters at several locations in Brazos County and makes this information available to MPO in monthly reports. One of these is located on Earl Rudder Freeway about one mile south of Harvey Rd (SH 30) in College Station. This particular counter allows us to make some observations regarding traffic volume trends on SH 6. In comparing traffic volume counts between 2002 and 2009 we can see that during and between both years the peak amount of volume occurs on Friday. In 2002, the counter shows a total volume of about 41,000 vehicles per day on Fridays. Fast forward to 2009 and the counter shows a Friday volume of about 55,000 vehicles per day. This represents a growth rate of almost 5% (4.8%) per year! Part of this increase is due to rapid growth in the southern part of College Station. It can also be attributed to growth in the Greater Houston Metropolitan Area.

TxDOT SH 6 Traffic Volumes, 2009



Source: TxDOT

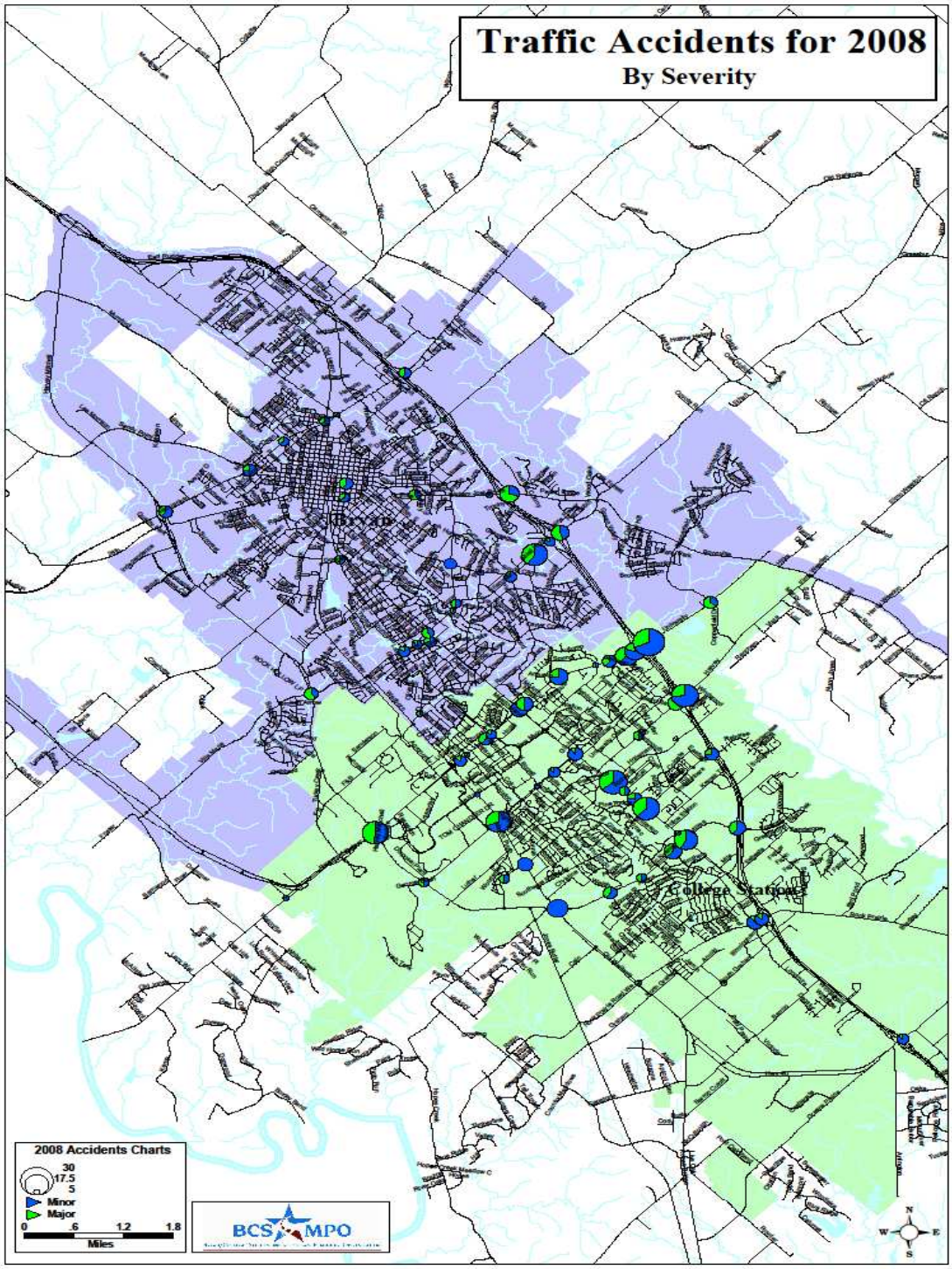
4.2 Traffic Accidents

An analysis of traffic accidents in Bryan and College Station shows that most traffic accidents are occurring in locations that have the greatest volumes. The map included here shows traffic accidents that occurred in Bryan and College Station during 2008. The data from which this map was produced was collected from both the Bryan and College Station Police Departments. The map shows all intersections at which there occurred five or more accidents during the 2008 calendar year. In addition, the map graphically breaks down the accidents into minor accidents - accidents in which only vehicles or property was damaged, and major accidents - accident in which personal injury occurred. It should be noted when looking at this map that it does not show midblock locations where multiple accidents occurred. Nor does it depict accidents that included DWI or hit-and-run situations. It should also be kept in mind that the two cities collect accident data and report it in slightly

2008 Top Crash Locations	# of Crashes
University Dr. @ E. Feeder SH 6	29
Texas Ave. @ Holleman	23
Harvey Rd. @ E. Feeder Rd SH 6	22
Texas Ave. @ Southwest Parkway	22
University Dr. @ Harvey Mitchell Parkway	21

Source: B/CS Police Departments

different ways. This leads to a situation where MPO staff was forced to make some simplifying assumptions about accident counts in some locations.



4.3 How Road Projects are Prioritized

MPO staff and the TAC began reviewing the technical criteria and the transportation issue areas in September 2009. Based on direction to provide a more technical analysis, the meetings centered around capturing and ranking transportation issue areas based on technical merit.

The final worksheets were a combination of the public's priorities (as evident in the survey conducted), federal requirements and TAC subcommittee input. Subjective criteria was omitted, as much as possible, to allow for a purely technical review. Other non-quantifiable factors, such as concurrency, budgeting, improvement types, and previous commitments will be, more appropriately, addressed by the Policy Committee.

The following factors were considered:

Highway Criteria included

- **Current Level of Service**- Delay
- **Crash History/ Frequency**- History and frequency of crashes at a certain location
- **Connectivity Alternatives**- These projects would provide connections between existing roadways where there are no facilities existing. Gaps in the system are eliminated, thus providing additional travel alternatives and dispersion of traffic.
- **Crash Severity**- Severity of crashes at certain locations
- **Anticipated Level of Service**- Anticipated delay
- **Consistent with Adjacent Sections**- These projects address sections that aren't consistent with connecting section. Roadway corridors would be made more uniform, thus removing potential bottlenecks and meeting driver expectancy.

Each of the criteria list above was given a certain weight and then applied to each issue area. For example, Current Level of Service was given a weight of 10, whereas Consistent with Adjacent Sections was given a weight of 1. These were then applied to each individual issue area by the TAC subcommittee to come up with the final scores.

4.4 List of Proposed Road Projects

Over the next 25 years, funding will be extraordinarily limited. It is assumed that approximately $17 million dollars will be available for "Urban Area Corridor Projects", also known as Category 3 funding. Projected dollars for "Structures Replacement and Rehabilitation" or Category 6 monies will also be available. Other categories of funding, such as Enhancement funds or Safe Routes to School funding is a competitive grant program and can not be assumed in these scenarios. Also, *existing* Congressional High Priority Projects are included. However, in light of the cutbacks at the Federal level, no new earmarks are assumed.

It is likely that new revenue mechanisms and tools for the local regions will alter funding projections, as Federal and State governments work together on various transportation legislation. In which case, the MPO will amend this document and allow the public to further comment on any changes.

List of Proposed Road Projects

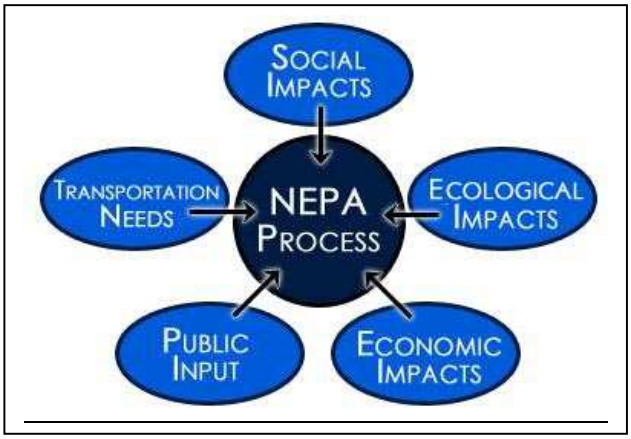
	Issue Area	Project	Const. Cost	TPC	Potential Funding Source
1	**SH 6 @ Rock Prairie Rd.**	**6 lane bridge with turn-arounds with pedestrian facilities**	$6M	$8M	Category 3
2	**FM 1179 (SH 6 to E. 29th)**	**raised median, turn lanes**	$7M	$11M	Category 3
3	**Rock Prairie Rd. (SH6 to Longmire)**	**widen to 6 lanes with intersection improvements**	$2M	$5M	Local funding (CS)
4	**FM 60 (SH6 to FM 158)**	**widen to 6 lanes**	$12M	$25M	Category 3
8	**SH 6 @ SH 40 (Fitch)**	**direct connect**	$10M	$15M	Category 6
13	**FM 2347 @ FM 2154/ UPRR**	**grade separation**	$25M	$48M	Category 6

Notes: *TPC=Total Project Costs*
The # to far left indicates order of where it ranked overall (see Appendices for complete list)
Category 3 funds are only projected to cover costs associated with projects #1, 2, and 4.
Only certain types of projects are eligible to receive Category 6 types of funds, which is why the numbers on the left jump down further on the ranking list.

FM 60 (SH6 to FM 158) is expected to receive approximately $5.4M in earmarks, and both the City of Bryan and the City of College Station have plans to designate $1.25M each for the project. That leaves an estimated $4.1M left needing to be funded with the Category 3 funds.

4.5 NEPAssist Analysis

The National Environmental Policy Act (NEPA) is the basic national charter for protection of the environment. NEPA establishes policy, sets goals, provides means for carrying out policy, and contains provisions to ensure that federal agencies act according to the letter and spirit of the Act. Although the requirements and intent of NEPA are separate from the federal planning requirements that structure this MTP, Federal transportation regulations (23 CFR 450.316 and 23 CFR 450.322) do require MPOs to consider the environment and potential mitigation strategies for environmental impacts from transportation projects included in their plans. TxDOT has offered to make license to NEPAssist available to MPOs in Texas to assist in this effort.



NEPAssist helps to facilitate the environmental review process by identifying potential issues in the early stages of project development. This application draws environmental data dynamically from EPA regions' Geographic Information System databases and from the census to provide immediate screening of demographic and environmental assessment indicators for a user-defined area of interest.

In the interest and purpose of this document, the Proposed Road Projects were each evaluated, using NEPAssist. The results are shown on the following page.

NEPAssist Analysis

	Issue Area	Project	Environmental Notes
1	**SH 6 @ Rock Prairie Rd.**	**6 lane bridge with turn-arounds with pedestrian facilities**	**Within 500 Year Flood Plain; Within 1,000 meters of an NCLD wetland**

Total Persons:	1183	Land Area:	100%	Households in Area:	423
Population Density:	1506.4 /sq mi	Water Area:	0%	Housing Units in Area:	433
Percent Minority:	12.1%	Persons Below Poverty Level:	120 (10.1%)	Households on Public Assistance:	2
Percent Urban:	100%	Housing Units Built <1970:	1%	Housing Units Built <1950:	0%

	Issue Area	Project	Environmental Notes
2	**FM 1179 (SH 6 to E. 29th)**	**raised median, turn lanes**	**Within 100 meters of a facility; Within 100 year flood plain; within 100 meters of a school; within 1,000 meters of a NCLD wetland**

Total Persons:	3150	Land Area:	100%	Households in Area:	1410
Population Density:	2001.31 /sq mi	Water Area:	0%	Housing Units in Area:	1509
Percent Minority:	17.4%	Persons Below Poverty Level:	516 (16.4%)	Households on Public Assistance:	20
Percent Urban:	100%	Housing Units Built <1970:	13%	Housing Units Built <1950:	0%

	Issue Area	Project	Environmental Notes
3	**Rock Prairie Rd. (SH6 to Longmire)**	**widen to 6 lanes with intersection improvements**	*Because this project is using local funds, the MPO is not required to use NEPAssist for planning purposes*

	Issue Area	Project	Environmental Notes
4	**FM 60 (SH6 to FM 158)**	**widen to 6 lanes**	**Within 100 Year Flood Plain; Within 100 Meters of a school; Within 1,000 meters of an NCLD wetland**

Total Persons:	2038	Land Area:	99.7%	Households in Area:	785
Population Density:	773.23 /sq mi	Water Area:	0.3%	Housing Units in Area:	809
Percent Minority:	16.3%	Persons Below Poverty Level:	430 (21.1%)	Households on Public Assistance:	5
Percent Urban:	99%	Housing Units Built <1970:	9%	Housing Units Built <1950:	1%

	Issue Area	Project	Environmental Notes
8	**SH 6 @ SH 40 (Fitch)**	**direct connect**	**Within 500 Year Flood Plain; Within 1,000 meters of an NCLD wetland**

Total Persons:	202	Land Area:	99.9%	Households in Area:	65
Population Density:	257.86 /sq mi	Water Area:	0.1%	Housing Units in Area:	67
Percent Minority:	16.6%	Persons Below Poverty Level:	3 (1.5%)	Households on Public Assistance:	0
Percent Urban:	0%	Housing Units Built <1970:	1%	Housing Units Built <1950:	0%

	Issue Area	Project	Environmental Notes
13	**FM 2347 @ FM 2154/ UPRR**	**grade separation**	**Within 500 Year Flood Plain; Within 100 Meters of a school; Within 1,000 meters of an NCLD wetland**

Total Persons:	2538	Land Area:	100%	Households in Area:	423
Population Density:	3233.72 /sq mi	Water Area:	00%	Housing Units in Area:	460
Percent Minority:	24.4%	Persons Below Poverty Level:	399 (15.7%)	Households on Public Assistance:	7
Percent Urban:	100%	Housing Units Built <1970:	64%	Housing Units Built <1950:	29%

Section 5 Bicycle & Pedestrian

5.1 City of College Station

According to the City of College Station's Comprehensive Plan, College Station currently accommodates bicyclists by on-street bike lanes, off-street multi-use paths, and signed bicycle routes. Pedestrians are accommodated by a network of sidewalks and multi-use paths.
Over the past couple of decades, the City has adopted a series of master plans addressing the bicycle and pedestrian needs of the community. Each of these plans has initiated actions and funding approvals by residents, resulting in 32 miles of on-road bike lanes, three miles of off-road multi-use paths, 50 miles of signed bicycle routes, and 106 miles of sidewalks dispersed throughout the City. TAMU has a similar network, facilitating bicycle and pedestrian movements on campus.

The City of College Station is currently in the process of putting together a Bicycle, Pedestrian & Greenways Masterplan. The new plan will incorporate three previous plans on sidwalks, greenways and bikeways. The new Masterplan should be complete by January 2010.

5.2 City of Bryan

The City of Bryan has great potential to increase bicycle transportation with its sizeable bicycling population and active bicycle advocacy groups. In addition to bikeways, sidewalks are also a much requested infrastructure item throughout the city. Because of the need for increased sidewalks and bikeways, a plan for a proposed sidewalk system was developed, as well as a plan for a proposed bikeway system.

According to the City of Bryan's Comprehensive Plan, the majority of existing sidewalks were installed by developers in subdivisions constructed after 2000 when the City of Bryan modified its Subdivision Ordinance to require sidewalks on both sides of all curb and gutter streets. There are also sidewalks throughout the Downtown area and more scattered throughout the community which have been installed by the City or TxDOT as part of their Capital Improvements Programs.

The existing bikeway system in Bryan consists of approximately 5 miles of bike paths along FM 158 between FM 60 and SH 6, approximately 3.5 miles of bike paths, currently constructed or under design, within the Park Hudson, Austin's Colony and Shirewood Subdivisions, approximately 17 miles of off street bike trails at Bryan Utilities Lake, and a bike lane on South College Avenue between Villa Maria Road and Dodge Street.

5.3 How Multimodal Projects are Prioritized

MPO staff and the TAC began reviewing the mulitmodal technical criteria and transportation issue areas in October 2009. Based on direction to provide a more technical analysis, the multimodal criteria listed below was used when ranking issue areas.

Each of the criteria list above was given a certain weight and then applied to each issue area. For example, Safety was given a weight of 10, whereas Potential Improvement/ Enhancement was given a weight of 1. These were then applied to each individual issue area by the TAC subcommittee to come up with the final scores.

Multimodal Criteria included

- **Accessibility**- Provide non-vehicular access to/ through community destinations (commercial, residential, parks, schools, etc.)
- **Safety**- Improve safety of non-vehicular travel
- **Connectivity**- Complete gaps in existing non-vehicular travel routes or provide for new routes
- **Potential Improvement/ Enhancement**- Addresses future needs of non-vehicular travel (existing users identified)
- **Exisiting Improvement/ Enhancement**- Addresses current/ existing needs of non-vehicular travel (existing users identified)
- **Provides Access to Essential/ Basic Services**- Enhances non-vehicular travel to/ from necessary services such as employment, health facilites or grocery
- **Reduces Reliance on Vehicular Travel**- Removes typical vehicular travel from community by replacing commute with non-vehicular travel
- **Reduces Reliance on Congested Vehicular Corridors**- Removes non-vehicular travel from congested travel corridor thus improving all travel within corridor

5.4 List of Proposed Multimodal Projects

Multimodal projects are an important component to the overall transportation system. Reducing dependence on an automobile helps to alleviate congestion and help with air quality. Giving the public safe options in how to move about the community is also an important feature for a sustainable, vibrant, growing community.

One of the key partners in providing multimodal alternatives is TxDOT. In Brazos County, the opportunity to provide bicycle paths, sidewalks, and other options are routinely designed into road projects. Both cities and the County also make smart decisions about incorporating multimodalism into their planning work. Another vital partner is The District and TAMU Transportation Services. By providing transit options, these groups have successfully removed vehicles from the road and coordinated service to best provide for those that utilize the system. More information about transit is in the next Section.

A full listing of the Multimodal Transportation Issue areas is listed in the Appendix. The following projects, however, have funding identified:

	Issue Area	Project	Const. Cost	TPC	Funding Source
1	**College Main in Bryan**	**sidewalks, bike lanes**	$6M	$8M	Locally funded (Bryan)
2	**University- Northgate Area**	**widen sidewalks, add median, crosswalk enhancement**	$2M	$3M	TxDOT, Category 11 funds
4	**Wellborn @ George Bush**	**multimodal improvements**	--	--	Locally funded (CS) TIGER grant monies
6	**Wellborn @ Bell Tower**	**multimodal improvements**	--	--	Rail relocation funds
11	**CS Bike Loop Extension**	**multimodal improvements**	$169,900	--	Locally funded (CS)

Section 6 Public Transportation

6.1 The District

Brazos Transit District, also known as The District, began operation in 1974. Currently, The District operates transit in 16 counties; fixed routes, ADA paratransit and demand response services are offered in Brazos County.

Fixed Routes: The District provides seven fixed routes within the city limits of Bryan and College Station. The District purchased a new fleet for the fixed route service. These buses operate on ultra-low sulphur diesel and will seat 24 passengers and have 2 wheelchair positions. Presently, The District operates from 5 AM to 7 PM, Monday through Friday.

ADA Paratransit Service: This service is offered for the elderly and disabled for up to 3/4 of a mile of each fixed route. Four American with Disabilities Act (ADA) compliant vehicles currently operate within the city limits. The District provides free transportation to eligible, pre-certified Medicaid clients, within the Brazos Valley Region. This service is paid for by the Texas Department of Health and is provided to Medicaid approved appointments only. All Medicaid appointments are made through the Medicaid office.

Demand Response Service: A shared ride curb to curb service for individuals who are not disabled and/or do not have an origin and destination within 3/4 of a mile along the Fixed Routes. Trips may be made for any purpose. Appointments can be made up to seven days in advance up to next day service and are taken on a space available basis.

6.1.1 Transit Ridership Survey

A transit ridership survey is a way for the public to voice their opinion about bus routes, the bus services and their satisfaction with the overall system. It also allows a way for the MPO to gain a better understanding of the demographics in the area.

A Ridership Survey was conducted by staff members of The District in 2008. The surveys were conducted on the buses and at the Transfer Point. It was found that 69% of transit passengers are female and the largest group to use transit is in the age bracket of 25-34. For trip purpose, 42% used transit for work trips, 25% for shopping, 16% for medical, 15% for other personal, and 2% for school. The average number of trips per day is 2 and 53% surveyed use transit 5 days per week. 87% of the transit passengers feel safe while riding the buses. 75% of transit riders are within 0-3 blocks of the bus route, and 35% allow 46-60 minutes to reach their destination. Vehicle availability shows that 74% are without the use of a personal vehicle. The surveys also requested the following information for customer satisfaction: Cleanliness of the buses, Courtesy of the drivers, Comfort of the buses, Distance to the bus, Time to reach destination, Reliability of the busses, Schedule of the busses, and the Overall rating of the District. 76% of passengers surveyed were either satisfied or very satisfied with the service.

The District - Transit Analysis Demographics

Transit Analysis				
DEMOGRAPHIC	Percent Within Distance (miles)			
	1/8	1/4	3/8	1/2
Employed Persons	64.4%	73.5%	77.9%	79.1%
Minority Households	78.8%	87.2%	89.8%	90.3%
Zero-Car Households	85.1%	91.6%	93.7%	94.0%
Persons over 65	65.7%	74.0%	77.0%	78.3%
Persons with a Work Force Disability	68.7%	76.4%	79.5%	80.3%

Source: MPO

When compared to the last MTP update, the transit demographics shown in the above chart, demonstrate significant growth in transit ridership in all demographic categories.

6.1.2 Planned Public Transportation Projects

Passenger Shelters and Bus Pull Outs - $500,000
32 passenger shelters, placed with ADA accessible paths @ approximately $10,000 each, as well as 2 bus pull outs @ approximately $90,000 each are being planned. This project is funded but commitments of local share from the cities of Bryan and College Station are needed to go forward with this project.

Bryan Terminal/Garage - $19,000,000
In cooperation with the City of Bryan and Brazos County, The District is developing a multi-level and multimodal parking facility and transit terminal. The facility will be constructed across from the Brazos County Courthouse and will serve the entire governmental complex including the Courthouse, the Courthouse Annex, City Hall, and the Justice Center. The facility will include a 3 story office/retail building which will house Adult Probation and Parole on 2 floors, with retail on the first floor, approximately 1,000 parking spaces and a transit terminal to serve the Downtown and some of the Bryan routes. It will include streetscaping, landscaping, sidewalks, passenger shelters, and façade developments to adjacent structures. The project has $7.5 million in funding identified and the remaining funds are being requested from the TIGER grant. Congressman Chet Edwards has instrumental in securing congressional earmarks for this project. The facility is estimated to cost $16,000,000 to build and construction will last approximately 18 months. Construction will begin in the Fall of 2009.

South College - $42,000,000
The South College Avenue project will include bus rapid transit lanes, placing the utilities underground, landscaping, enhanced bus shelters, gateways, bike paths and pedestrian paths.

College Station Terminal - $4,600,000
In cooperation with the City of College Station, The District is developing a transit terminal to be located in the new proposed College Station City Center. The terminal will serve as The Districts' southern transit terminal and transfer point for the southern portion of Bryan/College Station and the County. When a decision is made on where the City Center and new City Hall will be located, The District will then request funding in an earmark.

6.1.3 Other Transit Initiatives

First Fridays: In conjunction with the City of Bryan, The District and TAMU have begun providing service for First Fridays. Beginning in College Station, TAMU buses extend their Bryan routes to bring individuals to the First Friday event in Downtown Bryan.

The District also works with other public and private entities to supplement the entities' transportation needs. Through TxDOT's Section 5310 program, The District receives funds to subcontract with these entities to provide services for special groups, specifically the elderly and disabled. Currently, *The District* subcontracts with Brazos Valley Mental Health/Mental Retardation Authority, Still Creek Ranch, North Bryan Community Center, Crestview Retirement Center and Age Managers. Only entities with non-profit status are eligible to receive funding for subcontracts. *The District* also has entered into a public-private partnership with a major industrial facility to supply transportation to the workers at the plant.

The Districts map along with other rider information is available on the web at www.btd.org or by calling The District at 979.778.4480.

Ridership from 2002 to 2008 increased 7.7% per year or an additional 23,162 riders per year. Economic factors such as student's usage, average fuel prices, median household income, types of employment, congestion, special generators, and the size of the transit provider's bus fleet can cause varying results on ridership numbers.

6.2 TAMU Transportation Services

TAMU Transportation Services operates bus service for students, employees, and on-campus visitors. TAMU operates 13 off campus routes and 9 on campus routes to provide service for both the east and west campus. The system maintains a fleet of 80 buses and 4 paratransit vans and is designed to serve students, faculty, staff, and on-campus visitors. The mission of TAMU Transportation Services is to provide the TAMU community with high-quality and innovative parking, traffic, and transportation resources and services in support of the teaching and research mission of TAMU.

On-Campus Service: The on-campus shuttle service is available free of charge to patrons who need transportation within the TAMU campus area. The on-campus bus service operates from approximately 7 AM to 6:00 PM during the fall and spring semesters. A modified schedule is maintained during summer, breaks and holidays. The daily On-Campus shuttle system is operated using seven routes and twenty-three buses.

Off-Campus Service: Off-campus routes focus on areas of high densities of where students live. Since the opening of the Blinn College Campus in Bryan in 1997, one of the 13 TAMU routes (Reveille) provides service for trips between the two campuses. The 13 off-campus fixed daytime routes are available from approximately 6:45 AM to 6:00 PM, Monday through Fridays. Evening service is provided from 6:00 PM to 12:00 AM. A reduced service schedule is operated during summer, breaks, and holidays.

Para-transit Service: Para-transit shuttle service provides door to campus transportation service for students, faculty, and staff of TAMU who are qualified under the Americans with Disabilities Act who live within a ¾ mile distance from the fixed routes. TAMU operates 4 accessible vehicles for this service and works in cooperation with Brazos Transit District in providing services to those living outside of the designated service area. Students, faculty, and staff must apply for the Para-transit services.

Charter Services: Limited charter services within the city limits of Bryan/College Station are available in support of educational, research and business functions. Acceptance of any charter is at the discretion of Transit Management and is dependent upon availability of drivers and equipment.

6.2.1 TAMU Ridership Analysis

In 2004, as part of the Bryan/College Station Socioeconomic Data Collection and Forecast Study, the Alliance Transportation Group and Ellis & Ellis performed transit analysis on the TAMU Bus Routes. The same was created for the The District; however a new category was added for the TAMU transit analysis. Since the majority of ridership falls onto the students of TAMU, it was imperative to the study to show the distance that students are willing to move for transit access, therefore the category of Persons 18 - 24 was added. For the current update of the MTP, MPO staff has recreated this analysis taking into account changes in the route structure during the intervening years. Also the base data used for this analysis was Census Block Level data which breaks down the population into age groups. For this particular effort, the age groups "15 - 19" and "20 - 24" were combined. The results of this update are shown in this table.

TAMU - Transit Analysis Demographics

Texas A&M Transit Analysis				
DEMOGRAPHIC	Percent Within Distance (miles)			
	1/8	1/4	3/8	1/2
Employed Persons	31.9%	40.0%	47.7%	52.6%
Minority Households	30.2%	37.8%	42.7%	47.7%
Zero-Car Households	30.9%	37.6%	41.9%	45.1%
Persons over 65	16.3%	26.6%	36.8%	43.3%
Persons with a Work Force Disability	21.4%	27.1%	32.6%	36.8%
Persons Aged 15 - 24 Years	59.90%	70.1%	74.3%	77.2%

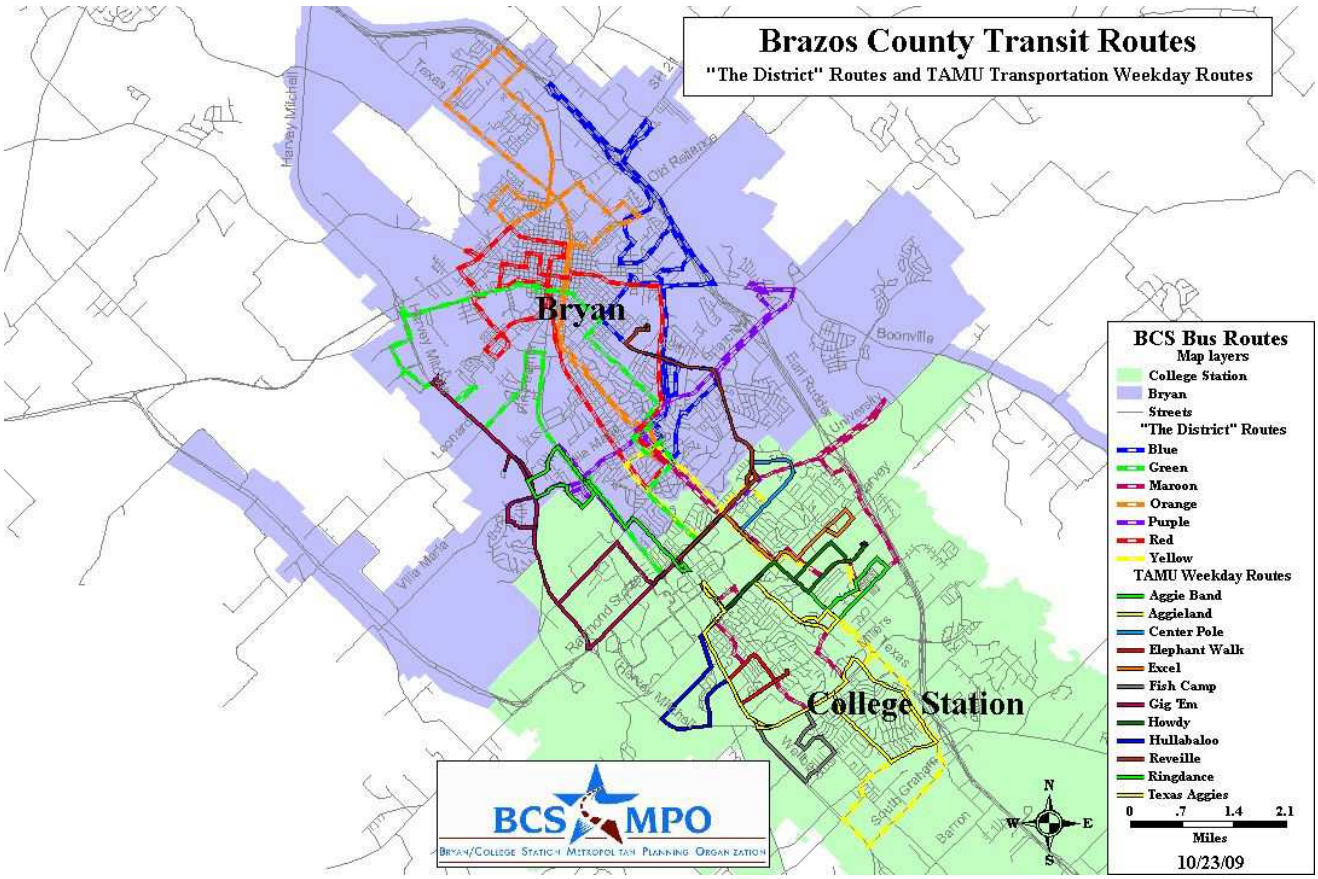
Source: MPO

6.2.2 TAMU Current Projects

TAMU realizes the importance of transportation for its large student body. The large student enrollment and staff contingent creates special needs and opportunities for innovation. TAMU Transportation Services was recently named “Parking Organization of the Year” by the International Parking Institute. It is the first university operation to be recognized in this manner by its peers.

Transportation Services has also been recognized for its “Get to the Grid” Shuttles, which are free football game day shuttles entirely funded by sponsorships. These shuttles transport approximately 5000 fans to and from Kyle Field and Post Oak Mall on football game days.
Unlimited bus service to all areas of College Station/Bryan is not economically practical so a

Park and Ride option was developed. Customers who do not live directly on a bus route may drive a short distance to an area where parking is allowed and catch the bus at the nearest stop. This allows access to all who choose not to purchase a parking permit. Park and Ride stops are located at Post Oak Mall and First Baptist Church of College Station.



6.3 Greyhound Intercity Service

Greyhound Lines, Inc. is the largest provider of intercity bus transportation, serving more than 2,300 destinations with 13,000 daily departures across North America. Here, locally, the Greyhound Lines Bus Company offers one route traveling in and out of the 891 Earl Rudder Freeway terminal in Bryan to several major destinations throughout Texas once a day. Destinations include such cities as Houston, Dallas, and Austin.

While Greyhound is well known for its regularly scheduled passenger service, the company also provides a number of other services for its customers. Greyhound Package Xpress service offers value-priced same-day and early-next-day package delivery to thousands of destinations. The company's Greyhound

Weekday Departures from Bryan, Texas
(return trip next day, not available same day)

Destination	Roundtrip Cost	Travel Time each way
Houston	$40.00	2 hours, 25 minutes
Austin	$64.00	4 hours, 45 minutes
San Antonio	$86.00	varies 6 to 9 hours

Source: Greyhound Website

Travel Services unit also offers charter packages for businesses, conventions, schools and other groups at competitive rates.

Greyhound buses provide an important alternative mode of transportation for the community. The addition of Greyhound promotes multimodal travel, in that, service is provided to other cities where international airports and ports exist. Conversely, there is small impact upon current traffic congestion.

6.4 Other Transportation Providers

6.4.1 Bryan/College Station School Districts

The College Station and Bryan Independent School Districts (CSISD and BISD) offer transportation services to school age children in most parts of Brazos County. The BISD and CSISD together provide essential transportation services to all of their schools covering over a 551 square mile service area. For all practical purposes, the city limits are the dividing line between school districts. School buses often operate during peak hours of traffic congestion, 7:00-8:00AM and 2:00-5:00 PM. The nature of school bus operations contributes more to the AM volume of traffic on area roadways and usually ends just prior to the beginning of the PM traffic peak at five o'clock.

College Station Independent School District has plans to open a future transportation support center hub at a 45-acre site at William D. Fitch Pkwy and Rock Prairie Rd. in August 2010. The $7.8 million transportation center will more than double the district's parking spaces for buses. The current transportation facility at 1812 Welsh Ave. has space for 79 buses, while the new site will have 175 parking spaces.

Officials hope the site will permanently accommodate the district's growth. Demographers predict College Station schools will have about 25,000 students in 25 years. Plans for the project show a site that includes future phases for a support facility, purchasing, warehouses and operations.

6.4.2 Private Transportation Providers

Taxi Service and Shuttle Service
Bryan/College Station is currently served by six taxi services providing transportation throughout the twin cities area. These include: AA-Aggieland Cab Services, Advantage Taxi, AAA University Taxi, Kaybo's Transport Taxi Service, Maroon Cab, and Twin City Taxi. The rates charged usually have a pickup fee of approximately $5, plus a per-mile rate averaging $2.25/mile. Service is provided to area airports and to some neighboring cities. Limousine service is also available between Bryan/College Station and metropolitan airports. There is currently no organized method that determines the ridership of a taxi service, and therefore no data is available on the impact of taxi services on the transit needs of the community.

GroundShuttle.com is a shuttle service that is provided between Easterwood Airport and Houston Intercontinental Airport for $25.99 each way, with an option to go to Hobby Airport for an extra $4.99 charge. They are closed on Thanksgiving day, Christmas, New Years Eve & Day.

Special or Group Event Service
Charter bus operations fill an important gap in the transportation system of Bryan/College Station. Brazos Transit may not provide these charters therefore; a small market exists in which the private sector may operate. Charter buses provide a viable resource for group travel and vehicle renting. The demand for charter bus service in Bryan/College Station has created a market that is both competitive and growing. Four charter bus businesses provide service and drivers. They include: BCS Bus Charter, Central Texas Trails, Clark Travel Charter Bus Service, Herring's Charter & Bus Tours. These services impact to traffic congestion are difficult to estimate, since departure and arrival schedules are based upon the needs of clientele. It is reasonable to assume that charter bus activity around tourists and visitor attractions would impact the adjacent roadways.

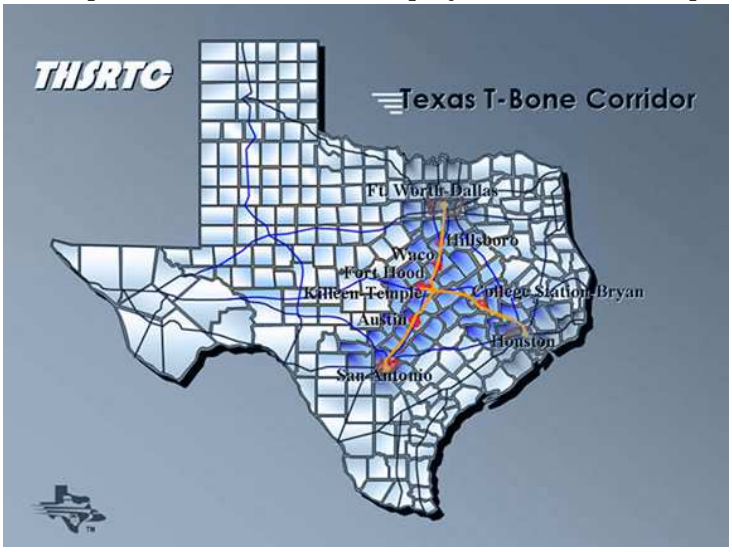
Section 7 Other Transportation Strategies

7.1 High Speed Rail

Texas High Speed Rail and Transportation Cooperation (THSRTC), is a not-for-profit corporation consisting of local transportation and elected officials from across the state of Texas who have gathered in a grassroots, collaborative effort to realize the first ever high-speed rail passenger system and multimodal transportation corridor in Texas. The City of College Station and Brazos County are both members of the THSRTC.

The "Brazos Express Corridor," would connect some of Texas' major population and economic centers into one continuous, multimodal corridor and allow for effective expansion of Texas' multimodal and intermodal capabilities.

The resulting alignment is being called the Texas "T-Bone." As the state population grows from the present 23 million to a projected 50 million people by 2040, 78% of the population is expected to live within the Texas "T-Bone" corridor. This multimodal corridor would provide the people of Texas an innovative solution to the state's growing congestion, air quality and homeland security issues. This alignment would serve Fort Hood, the largest military installation in the U.S., in deployment to the port of Beaumont, while linking Houston to Dallas- Fort Worth via Bryan/ College Station, Temple and Waco. The corridor would also serve as a FEMA evacuation route during times of natural disaster, and provide much-needed relief to our State's crowded highways.



7.2 Gulf Coast Strategic Highway Initiative

Although early in the planning stages, the MPO supports this initiative. Originally conceived to meet the military transportation needs of U.S. Army and National Guard facilities in Texas, Louisiana and Mississippi -- facilities which must deploy combat equipment through Gulf Coast seaports, it will also help to provide economic development opportunities missed in previous decades, by providing interstate access to Brazos County.

The Strategic Highway System would also provide relief routes for Interstate Highway traffic at points outside of air quality non-attainment areas and away from coastal tropical storm impacts. This upgraded highway infrastructure will also meet the need to move a growing amount of freight from one region to another.

7.3 Greenhouse Gases/ Climate Change

The MPO has identified some actions that will have a beneficial impact on greenhouse emissions in an effort to consider climate change in the transportation plan. Rideshare programs, Intelligent Transportation Systems/Traffic Operations Centers, and Signalization improvements all help in alleviating greenhouse emissions.

7.3.1 Ride Share Programs

TAMU Transportation Services is proud to provide a FREE ride sharing service using AlterNet Rides. This program connects Aggie drivers and riders who need to travel near or far. This service is sponsored by Transportation Services and is free to the user.

NuRide, a joint ridesharing effort established by the Brazos Valley Council of Governments and the MPO, is a program that uses the power of the Internet to match drivers with passengers using a variety of criteria. Preferences in riders can be chosen and points and prizes can be accumulated for the number of trips made.

7.3.2 Operational Improvements

Building new roads and adding capacity to existing roads are not the only means of alleviating congestion. There are a host of other, less costly solutions that in many cases can reduce congestion and improve the flow of traffic through a corridor. One such category of improvements are operation changes in the functioning of the transportation system. This consists mainly of making changes to the operation of traffic signals at intersections. These changes consist of changes to the signal phasing by changing the order or amount of time in which each direction can travel through the intersection. Operational improvements such as these can greatly improve the conditions at a single intersection. In the case of an entire corridor, it is possible to coordinate the operation of traffic signals all along the corridor, allowing traffic to move in a smoother manner over longer distances.

Other categories of operational improvements include transportation system management measures such as changes in the posted speed limit, speed bumps, etc. Any of these measures

that change the way in which traffic traverses a facility or corridor constitutes an operational improvement.

7.3.3 TTI Traffic Operations Center

In 2007, the entities of the Bryan/College Station MPO signed a Memorandum of Understanding in regards to working together in support of improving transportation operations in the Regional Concept of Transportation Operations for the Brazos Valley.

The Memorandum states that within Brazos County, all the MPO entities share a common goal for operating and managing the transportation system. As a result, each agency has developed programs and deployed infrastructure that supports the services that they provide. As the community continues to grow there is a need for these agencies to take a regional perspective. Working together will leverage the existing infrastructure, promote collaboration between agencies, improve transportation operations, improve safety, and showcase the successful application of research to operations.

In 2009, a Technical Oversight Committee was formed as a technical committee of the MPO to oversee the work on the Regional Concept of Transportation Operations. A person from each entity was assigned to be a member with final oversight coming from the MPO Policy Committee. To date, two earmarks have been received for this initiative, a work plan has been developed and work efforts have been discussed for each earmark.

7.3.4 Teleworking

Teleworking, telecommuting, working from home, or working at home is an arrangement in which employees enjoy flexibility in working location and hours. In other words, the daily drive to a central place of work is replaced by telecommunications links.

Percent Of Workers Working at Home		
Place	**2000**	**2008**
Brazos County	2.50%	2.90%
Texas	2.75%	3.80%
Source: US Decennial Census, American Community Survey		

7.3.5 Health & Human Services Transportation Coordination

Coordination between numerous partners and various Health & Human Services providers has been ongoing for approximately four years to help create a reliable, cost-effective public transportation network in the Brazos Valley Region utilizing the existing transportation resources throughout the area. HB 3588 provided the catalyst and formal process by which interested parties in our region could come together and plan the future of public transportation for the Brazos Valley. Partners in this effort include The District, MPO, Brazos Valley Council of Governments, Texas Department of Transportation and the Coordinated Regional Public Transportation Steering Committee, made up of Health & Human Service Providers and other interested members of the community.

Section 8 Aviation

8.1 Easterwood Airport

Easterwood Airport is located on the southwest side of College Station and approximately six (6) miles from downtown Bryan, at the intersection of FM 60 (Raymond Stotzer Parkway) and FM 2818 (Harvey Mitchell Parkway). The airport is owned and operated by TAMU and encompasses 760 acres, excluding approach zones. Easterwood Airport is designated as a primary commercial service airport under the National Plan of Integrated Airport Systems (NPIAS). As such, it is eligible for federal aid under the Airport Improvement Program.

Easterwood Airport Activity
for both international & national flights

	2004	2005	2006	2007	2008
Enplaned	73,661	87,971	84,604	88,196	78,282
Deplaned	71,479	86,512	81,907	85,945	75,494
Total	145,140	174,483	166,511	174,141	153,776

Source: Easterwood Airport

As of July 2004, Easterwood airport developed a master plan. The airport has followed this master plan and has made numerous improvements, such as: new or enlarged aircraft parking aprons, perimeter fencing (with automated gates), a perimeter road, high-mast lighting, and finished a parallel taxi way for the main runway.

8.1.1 Runway Systems

The airport has three runways:

- Runway 16-34 is the primary runway and is 7,001 feet long by 150 feet wide. This runway is equipped to handle both precision instrument landing systems (ILS) and non-precision instrument approaches.
- Runway 10-28 is 5,160 feet long by 150 feet wide. It is the primary crosswind runway and is most often used by general aviation aircraft during crosswind situations. This runway is equipped to serve non-precision instrument approaches.
- Runway 4-22 is 5,149 feet long by 150 feet wide. It is a secondary crosswind runway, is considered a visual, daylight use only runway, and is typically not eligible for Federal Aviation Administration (FAA) funding.

8.1.2 Air Traffic Control Towers (ATCT)

The airport is served by a FAA contract air traffic control tower, which operates from 8:00 AM until 9:00 PM, seven days a week. Easterwood airport is also serviced by the Houston Air Route Control Center.

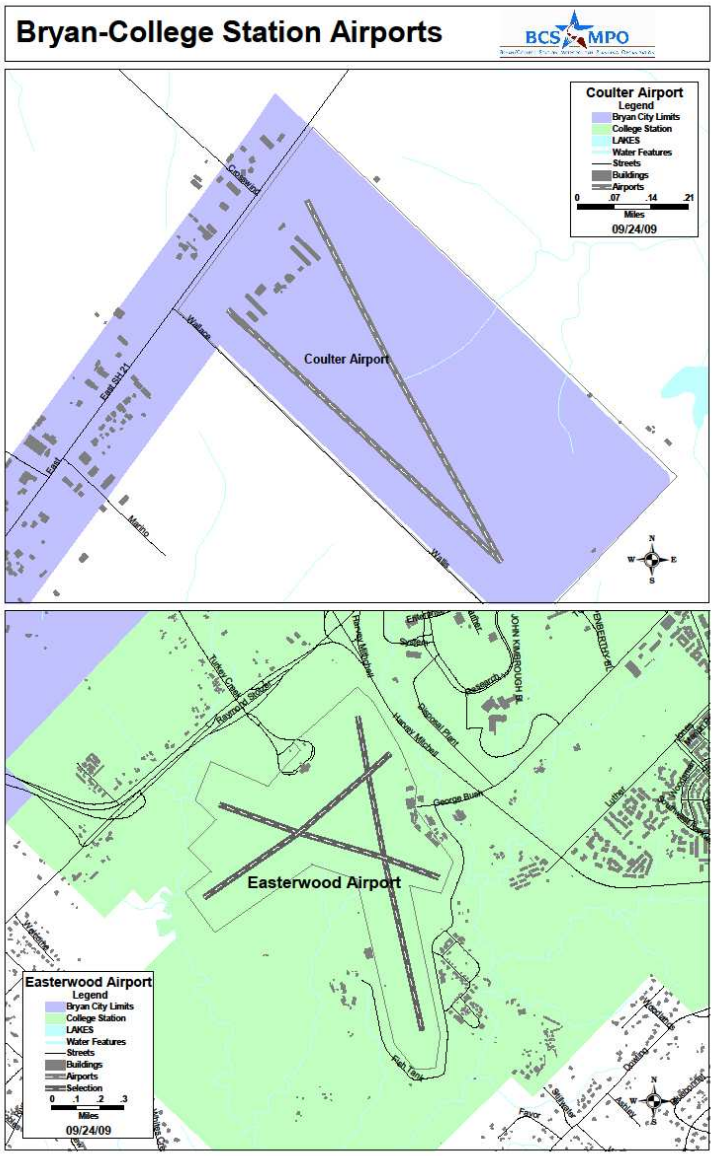
8.1.3 Terminals

Commercial Air carrier passengers enplane and deplane on the northwest side of the airport at the William A. McKenzie Terminal. The terminal has two levels and contains 32,188 square feet of space. The Terminal is now equipped with two passenger boarding bridges that passengers use to board and deplane from the second (upper) level. Public access is via University Drive/Raymond Stotzer Parkway (FM 60), off of the Turkey Creek Road exit.

A number of tenants are located in the McKenzie Terminal. These currently include two airlines, American Eagle and Continental Connection, three rental car agencies, Avis, Enterprise, and Hertz, a restaurant, a food vending area, and Easterwood Airport Administrative offices.
The General Aviation (GA) Terminal (the former air carrier terminal building), which was remodeled in 1994, serves general aviation users. It is located on the east side of the airport and is accessed off of FM 2818 (Harvey Mitchell Parkway) or from George Bush Drive. The GA Terminal Building is also kept in excellent condition and encloses approximately 5,200 square feet of space on a single level. The GA Terminal houses airport administration offices, and provides reception facilities for Avolar Aircraft Maintenance, the Brazos Valley Flight School, the TAMU Flying Club, TAMU System aircraft, and public aircraft.

8.1.4 Automobile Parking

Automobile parking lots are located at both the McKenzie Terminal and the GA Terminal. The McKenzie commercial parking lot consists of 450 pay parking spaces and 50 spaces reserved for rental cars. (The first two hours of parking are free.) The GA parking lot is comprised of 61 total parking spaces for both free public parking and employee parking.



8.1.5 Aircraft Storage

Aircraft hangar facilities consist of three corporate hangars, two community hangar (one houses the TAMU aircraft), and nine "Port-a-Port" style T-hangars for storage of GA aircraft. The GA ramp and hangars have

parking space for up to 150 GA aircraft, varying in size from small single engine to large corporate jets. The commercial air carrier ramp can also accommodate up to four Boeing 757 aircraft.

8.1.6 Vehicular Access

As stated above, the McKenzie Terminal is accessed from FM 60 (Raymond Stotzer Parkway) a four-lane interchange that allows access from east and west bound traffic. SH 47, located off FM 60 at the entrance to the McKenzie Terminal, permits access from SH 21. The GA Terminal is accessed from FM 2818 at the George Bush (FM 2347) intersection.

8.2 Coulter Field

Coulter Field is the second airport in the area and is located on SH 21 just east of SH 6. It is a general aviation airport which serves both private and business aircraft. It is owned by the City of Bryan and is operated by a private Fixed Base Operator. The primary runway at Coulter Field is 4,000 feet in length. The City of Bryan in concert with TxDOT Aviation contracted with Smith Western Engineers to develop an Airport Development Plan for Coulter Field. This plan was completed and reviewed by the Coulter Airfield Advisory Board. The Advisory Board unanimously recommended approval of the plan and recommended that it be forwarded to the Bryan City Council for their consideration. The Bryan City Council adopted the Airport Development Plan unanimously on June 13th, 2006. This plan included short-, mid- and long-term improvements for the airfield along with the creation of an airport zoning district.

Section 9 Freight Activities

9.1 Truck Transport

The motor freight carrier industry contributes substantial economic vitality to the Bryan/College Station area. Traffic congestion, from freight trucks, has been steadily increasing since the creation of the North American Free Trade agreement (NAFTA). There are two primary corridors used by motor carriers. These major routes are along SH 6 and SH 21. In December of 2002, the Texas Transportation Institute (TTI) established a road survey to determine motor carrier traffic. The roads that contain the most amount of motor carrier traffic are: Old San Antonio Road, Texas Avenue, FM 60, FM 1179, FM 2038, South College Avenue, Finfeather Road, FM 974 Greens Prairie Road, FM 2818, FM 2154, SH 30, FM 158, SH 47, George Bush Drive, Turkey Creek, Sandy Point Road, and FM 2776. Currently, there are nine motor freight carriers in the Bryan/College Station area, three of which provide service outside of Texas. During any one time these nine have up to one hundred tractor-trailers in combined operation.

The Bryan/College Station MPO ranks #145 out of 365 metropolitan planning organizations within the continental United States concerning freight growth, with a growth rate of .34%. All

Rank	MPO	State	Tons 2007	Tons 2017	CAGR
145	Bryan/College Station MPO	Texas	5,296,281	5,476,453	0.34%

MPO's within the state of Texas average .44%. The ranking was developed using IHS Global Insight's proprietary Transearch database of U.S county-level freight movement.

9.2 Rail Transport

The Union Pacific (UP) Class I railroad company is currently providing freight service to the Bryan/College Station planning area. The existing train track passes through the cities of Bryan and College Station, through urban and rural areas. UP operates a main freight line, the UP Houston Division (Navasota Subdivision and Bryan Subdivision line), from Houston throughout Bryan/College Station to Dallas/Fort Worth and beyond. Service to the Bryan/College Station area is primarily on the Houston Local route, which originates in Houston, stops in Bryan/College Station then proceeds north for other connections. Every other day, this route is reversed.

The Southern Pacific Railroad and the Missouri Pacific railroad have operated two rail lines through the area in the past. However, those companies within the last few years, have merged with UP and the current rail lines are now used solely by UP. This merger removed operational and competitive obstacles to rail planning. It should also be noted that one other rail company operate through Brazos County; Burlington Northern Santa Fe runs through the southern tip of Brazos County but provides no service to the urbanized area. Bryan and College Station's growth, circles around the track now belonging to UP, which serves as mainline links between Houston-Dallas and Houston-Fort Worth.

The UP train enters the Bryan/College Station area from the south on a rail line from Navasota and diverges into two routes just north of Villa Maria Road in Bryan. At this point, the former Southern Pacific route to Hearne and Dallas continues north along Finfeather Road, through downtown Bryan, and follows Texas Avenue and SH 6 out of town. The former Missouri Pacific route to Waco and Fort Worth diverges and runs to downtown Bryan where it crosses the other line and follows West 27th and West 28th Streets and SH 21 out of town. A passing track, approximately 8276 feet in length, is located between University Drive and Villa Maria Road and is long enough to allow north/south passage for trains up to 140 average-sized cars in length.

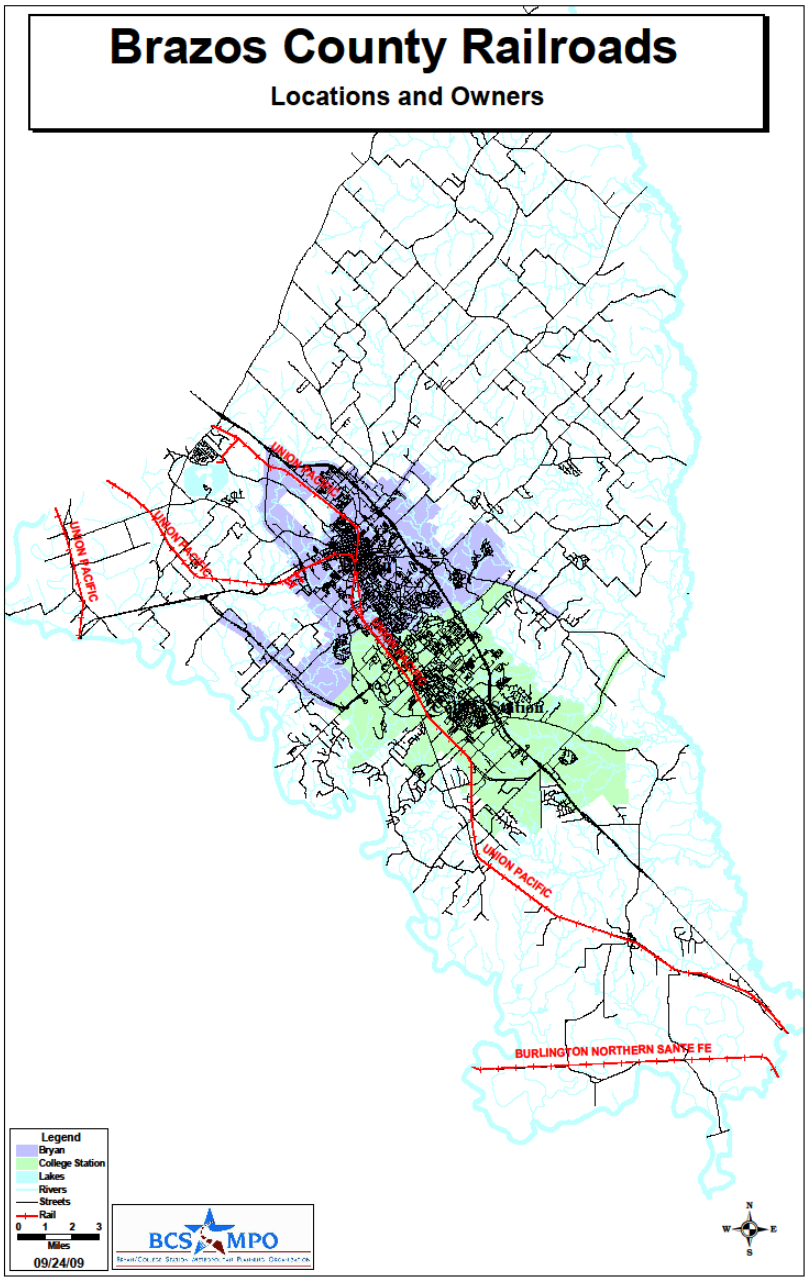
A public team track, approximately 480 feet in length, is located in Bryan just south of F&B Road. The team track, adjacent to the passing track, is used by some businesses in Bryan and College Station and has capacity to hold 8 cars. UP trains also have a passing track, 3,678 feet long, located south of downtown Bryan, and two-yard tracks paralleling the passing tract, at 3,482' and 2,067'.

Much of the continuous welded rail and crossties in Brazos County were laid in 1993 and in 2008, they were replaced through College Station to north of Villa Maria. The rail lines coming into Brazos County must be continually checked for problems and replacement. UP completed a major overhaul of the Fort Worth line when thousands of crossties and several grade crossings were replaced.

There are four grade separated rail crossings, FM 2818 (north of Bryan), SH 21 (San Jacinto Avenue), Villa Maria and FM 60 (University Drive). FM 2818 at Wellborn Rd is currently in the process of being constructed. Plans are in the works to grade separate George Bush at Wellborn, but funding has not been identified. The remainders are at grade with and without signalization. There are several private sidings in the Bryan/College Station area, primarily associated with industrial parks.

UP currently reports an average of 18 trains a day. The average length of each train is 6,000 feet. The average speed is 30 mph (49 km/h). The number of trains per day is expected to increase to a high of 48 trains per day in the future according to company officials.

While there is no way to accurately forecast the change in this freight traffic over time, the expectation is that the rail service to customers will continue to expand as the population and business increases in future years.



Section 10 Public Involvement

The Bryan/College Station Metropolitan Planning Organization MTP process included extensive work done by staff and the Technical Advisory Committee (TAC), with oversight from the policy making board - the Policy Committee (PC). By working together, great strides were made in the development of a comprehensive, continuing and cooperative MTP.

10.1 Public Outreach

Public outreach included press releases, two public kick-off meetings, an online survey, a media blitz, a Call for Transportation Issue Areas and a public release of the draft MTP. Press releases were forwarded to The Chamber's mailing list, both City Secretaries, media, other interested parties, and the advertisements were run in the Sunday edition of The Eagle. The kick-off meetings were held at each of the public libraries in Bryan and College Station in June 2009. The purpose of the meeting was to introduce the kick-off of the MTP.

10.1.1 Transportation Survey

The survey reached out to thousands of citizens, including neighborhood groups, public and private agencies and schools in the area. The purpose of the survey was to assess the community's transportation priorities for Brazos County.

According to the survey, 49.6% of respondents placed the greatest importance on *Providing Alternative Transportation Options*, while only 23.1% placed the most importance *on Improving Safety Across All Modes*. The following responses are broken down into the categories of traffic congestion, parking, general perceptions, mode of travel, highway initiatives and funding.

Traffic Congestion
Regardless of where the respondent lived (Bryan, College Station, rural Brazos County or other), the majority of respondents felt that congestion was getting worse every year. Yet at the same time the majority of respondents felt that traveling by auto within Brazos County is safe. When asked if they often cut through neighborhoods to avoid congested, the majority of respondents associated with TAMU admit that they do often cut through. This reinforces the observed behavior of say, for example, using Bizzell and Old Main to avoid the congested intersections at University and Texas Avenue and George Bush Drive and Texas Avenue.

Parking
Opinions begin to diverge with respect to parking issues. When asked about parking in downtown Bryan, a slight majority of College Station residents (41.6% to 39.0%) do not agree with the statement that there is not enough parking in the Downtown area. With respect to parking in Northgate, the majority agrees that there is not enough parking.

General Perceptions
Significant majorities admit that they do not know where to find information on traffic conditions and construction.

Significant majorities of respondents believe that the overall driving experience in Brazos County is pleasant. Yet, a significant majority also believes that driving in Brazos County becomes more dangerous every year. Looking at crash data collected by TXDOT from 2003 through 2008, it can be seen that while the number of fatalities has decreased over the five year period (from 32 in 2003 to 17 in 2008), the number of accidents has increased (3,676 in 2003, 3,899 in 2008).

Mode of Travel

Regardless of how the respondent categorizes themselves, the vast majority of respondents drive alone to get to work or school. With regard to using a bicycle to get to work, 25.6% of TAMU faculty/staff respondents and 20.5% of TAMU student respondents reported using a bicycle to get to work or school. This is in contrast to the Interested Citizens who responded; 7.1% reported riding a bicycle to work or school. Claiming bus as the mode of choice for work or school was 17.9% of college student respondents, as opposed to only 2.3% of TAMU Faculty/Staff and 0% of the Interested Citizens who responded.

Looking at the same modes from the standpoint of residential location, 13.0% of Bryan respondents and 19.0% of College Station respondents reported riding a bike to work or school. Of the respondents who live in Bryan, 7.9% reported using the bus as opposed to 8.9% of respondents who live in College Station.

Highway Initiatives

By far the most popular initiative in managing congestion is to institute operational improvements such as signal timing/coordination and geometric improvements to intersections. In addition, among respondents from outside of Brazos County the building of park and rides ranked high.

Funding

Answers to funding questions were mostly consistent regardless of residential location or how the respondent categorizes them self. The question of supporting gas tax increases to pay for all types of transportation projects received majority support with the exception of Interested Citizens who were evenly split on supporting and not supporting this measure. Bond issues as a mean of raising revenue for transportation projects also received majority support. However, the majority of respondents would not support increasing gas taxes to pay for highway projects only. An interesting dichotomy occurs over the question of support for a locally imposed tax to pay for transportation projects. Support for locally imposed tax increases received significant majority support among those associated with TAMU, both faculty/staff and students. Yet among other categories of respondents the majority indicated that they would not support local tax increases. On the issue of a locally imposed tax to raise revenue for increased bus service, respondents in Bryan showed significant support as opposed to College Station respondents, the majority of whom indicated that they would not support this measure (51.0% in Bryan support the measure versus 65.8% in College Station who would not support the measure). Finally, support for increased vehicle registration fees is mixed with majority support coming only from College/University faculty/staff (70.7% would support vs. 29.3% would not).

10.1.2 Call for Transportation Issue Areas

The Call for Transportation Issue Areas for Roadway and Multimodal projects was completed on September 8, 2009. Any person or entity was encouraged to submit a transportation-related roadway, bike, pedestrian, or transit issue area to the MPO. Over 40 entries, including a TAMU class project submittal were received.

Several entrants observed that the Bryan/College Station area needs more sidewalks and bike lanes, safe routes for cycle traffic and a need for the local transit system to work more days a week and to be available later into the night. There were concerns expressed about the intersections at Longmire and Rock Prairie, at Graham Road and Longmire, and that the overpass at Texas 6 and Rock Prairie needs to be widened. One entrant expressed a need for roundabouts at intersections along Texas Avenue, one commented on the need for more on campus student housing, and one expressed the need for a high-speed rail system down the middle of Texas 6. The need to look at the timing of traffic signals was mentioned, as well as the need for additional turn lanes.

The submittals that identified issue areas along a roadway were reviewed by the Technical Advisory Committees MTP subcommittee. Any issue area that was not already identified, was added to the list. The subcommittee then ranked the Issue Areas using the technical ranking criteria listed in Section 4- Roads of this document.

The subcommittee also met and discussed the multimodal list of Transportation Issue Areas and ranked them using the technical criteria listed in Section 5- Bicycle & Pedestrian of this document.

Section 11 Funding Summary

In general, federal funds are made available to MPOs, by way of TxDOT from FHWA and other sources, such as Congressional High Priority Projects. Different funding categories for the Statewide Preservation Program (Maintain it) and the Statewide Mobility Program (Build It) are shown on the next page. The MPO is not eligible to receive all categories of funding; of those categories of funding available, the financial forecasts performed at the State and Federal level are projecting huge, across-the-board insolvencies. The next authorization of a Federal transportation bill, expected to pass in 2010, will need to include revenue generating mechanisms. However, as of the date of this MTP, the funding outlook for the next 25 years is expected to decrease rather dramatically. The Federal funds alone will not be substantial enough to maintain or build new transportation infrastructure.

The intent of this section is to provide a basis for evaluating the future financial resources for Brazos County, as it relates to transportation funding. The MPO will readdress the financial forecast when better information becomes available.

Brazos County has had strong leadership in Congress in securing earmarks for needed transportation projects. The American Recovery & Reinvestment Act (ARRA) of 2009, also provided additional monies that have helped fund needed projects.

Transportation Network 25-Year Projected Funding (2010-2035)

Funding Source	Category of Work	Revenue Estimate
Federal - FHWA	1- State preventative Maint. & Rehab.	-
	2- Metro Corridor Projects	-
	3- Urban Corridor Projects	$17,100,000
	4- Statewide Connectivity	-
	5- CMAQ	-
	6- Structure Rehabilitation	$35,000,000
	7- Metro Mobility	-
	8- Safety *	$18,000,000
	9- Enhancements	-
	10- Miscellaneous	-
	11- District Discretionary *	$10,000,000
	12- Strategic Priority	-
	Governor's Award	-
TOTAL:	**Federal FHWA**	**$80,100,000**
Federal - FTA	Section 5309 (Section 3)	$125,000,000
	Section 5307 (Section 9)	$42,034,384
	Section 5310 (Section 16)	$3,138,336
	State TDC's	$627,680
	Section 5311 (Section 18)	$48,186,250
TOTAL -	**Federal FTA**	**$218,986,650**
Transit-Matches	State Match for Transit Projects	$6,600,128
	Local Match for Transit Projects	$32,329,968
TOTAL -	**Transit Matches**	**$38,930,096**
Local-	Local Funding	$4,500,000
TOTAL -		**$4,500,000**

The revenue estimates are given for all known modes and categories of funding to the extent possible as of October 2009. The MPO is not eligible for all categories of funding, and the 25-year funding forecast was projected for the 2010-2035 plan period. A historical perspective of each work category was calculated to represent the funds expected within the MPO boundary.

** Categories 8 & 11 are used for Grouped TIP projects.*

Legislative Earmarks & ARRA funding

Projects	Earmarks/ ARRA	Totals
HWY 21	Earmarks	$7,688,248
University Dr. (SH6 to FM 158)	Earmarks	$5,390,418
Texas Transportation Institute (ITS pilot)	Earmarks	$990,000
Rail Relocation Project	Earmarks	$22,984,486
Barron Rd	Earmarks	$2,137,790
	ARRA funds	$8,796,460
Parking Terminal/ Garage	Earmarks	$4,229,293
	ARRA funds	$2,793,817

Appendix A

List of Prioritized Highway Transportation Issue Areas

The following includes projects that have been identified as necessary future roadway improvements, based on growth forecasts and the resulting anticipated increases in traffic over the next 25 years. The lists were completed with the cooperation of the Cities of Bryan and College Station, Brazos County, TAMU, TxDOT and The District. Only a few issue areas were developed into projects because of the limited anticipated funding expected. Most all rehab or new construction projects contain multimodal aspects.

Raw scores from the MPO Technical Advisory Committee, September 2009

	Issue Area	TOTAL	Project	Const. Cost	TPC *
1	**SH 6 @ Rock Prairie Rd.**	**241**	**6 lane bridge with turn-arounds with ped facilities**	$6M	$8M
2	**FM 1179 (SH 6 to E. 29th)**	**227**	**raised median, turn lanes**	$7M	$11M
3	**Rock Prairie Rd. (SH6 to Longmire)**	**220**	**widen to 6 lanes with intersection improvements**	$2M	$5M
4	**FM 60 (SH6 to FM 158)**	**204**	**widen to 6 lanes**	$12M	$25M
5	**FM 60 (FM 2154 to BS6-R)**	**202**	**median, turn lane, ped facilities**	$4M	$5M
6	**FM 158 (Villa Maria to SH 6)**	**200**	**raised median, turn lanes**	$4M	$5M
7	**FM 60 (BS-6-R to SH 6)**	**196**	**complete median, complete ped facilities**	$2M	$3M
8	**SH 6 @ SH 40 (Fitch)**	**196**	**direct connect**	$10M	$15M
9	**SH 6 (FM 158 to Rock Prairie Rd.)**	**194**	**widen to 6 lanes**	$20M	$25M
10	**SH 6 (FM 158 to Rock Prairie Rd.)**	**194**	**x ramps**	$35M	$43M
11	**FM 2818 (FM 2154 to SH 6)**	**193**	**turn lane, raised median**	$8M	$11M
12	**BS6-R @ FM 1179**	**185**	**median, turn lane, ped facilities**	$3M	$8M
13	**FM 2347 @ FM 2154/ UPRR**	**182**	**grade separation**	$25M	$48M
14	**SH 6 @ FM 60**	**180**	**turn around structures**	$5M	$7M
15	**FM 2154 (FM 60 to FM 2347)**	**178**	**widen, turn lanes, medians**	$8M	$12M
16	**SH 21 (BS6-R to SH 6)**	**178**	**widen, turn lanes, medians**	$8M	$14M
17	**BS6-R @ FM 60**	**174**	**median, turn lane, ped facilities**	$3M	$8M
18	**SH 6 @ FM 1179**	**174**	**turn around structures**	$5M	$7M
19	**BS6-R (29th St to SH 21)**	**171**	**median, turn lane, ped facilities, widening**	$10M	$20M
20	**SH 6 @ SH 30**	**168**			
21	**SH 6 @ FM 158**	**166**			
22	**SH 30 (BS6-R to SH 6)**	**164**			
23	**FM 60 (FM 2154 to FM 2818)**	**153**			
24	**BS6-R (FM 1179 to 29th St)**	**152**			
25	**SH 6 @ SW Parkway/ Raintree**	**148**			
26	**BS6-R (FM 60 to FM 1179)**	**147**			
27	**FM 1179 (E. 29th to BS6-R)**	**147**			
28	**FM 2818 (FM 2154 to FM 60)**	**145**			

* TPC = Total Project Cost

Raw scores from the MPO Technical Advisory Committee, September 2009, continued

29	**FM 2818 @ FM 1179**	**143**
30	**Barron Road (Decatur to SH 40)**	**138**
31	**SH 6 (Rock Prairie Rd. to SH 40)**	**138**
32	**BS6-R (FM 2818 to SH 6)**	**134**
33	**FM 2154 (SH 40 to FM 159)**	**129**
34	**FM 1179 (FM 158 to Merka Rd.)**	**128**
35	**SH 6 @ SH 21**	**124**
36	**FM 2154 @ UPRR/ Rock Prairie Rd**	**123**
37	**College Main (CS Limits to Old College)**	**120**
38	**FM 2154 @ UPRR/ Holleman Dr.**	**119**
39	**FM 1179 (BS6-R to Wellborn)**	**115**
40	**SH 40 (SH 6 to FM 2154)**	**115**
41	**SH 6 @ Old Reliance/ MLK**	**114**
42	**SH 6 (SH 21 to FM 158)**	**112**
43	**SH 6 @ FM 2818 S**	**108**
44	**S. College (Villa Maria to Main St.)**	**106**
45	**FM 1179 (FM 158 to SH 6)**	**105**
46	**Rock Prairie Rd. (SH6 to WD Fitch)**	**105**
47	**SH 30 (SH 6 to FM 158)**	**105**
48	**Sims/ Groesbeck/ 33rd @ UPRR**	**104**
49	**FM 1179 (Wellborn to FM 2818)**	**101**
50	**S. College (University to Villa Maria)**	**101**
51	**SH 6 @ Oak Hill Drive**	**96**
52	**FM 2818 (FM 60 to FM 1179)**	**94**
53	**SH 6 @ FM 974 (Tabor)**	**93**
54	**FM 1179 (FM 2818 to SH 47)**	**91**
55	**FM 2818 @ FM 2347**	**90**
56	**FM 2818 @ FM 60**	**88**
57	**SH 40 @ Barron Rd**	**84**
58	**SH 40 @ Arrington**	**82**
59	**FM 2818 (FM 1179 to SH 21)**	**81**
60	**FM 2818 @ FM 1688**	**78**
61	**SH 6 (BS6-R North to SH 21)**	**62**
62	**FM 2818 (SH 6 to SH 21)**	**59**
63	**Spur 308 @ Old College**	**58**
64	**WD Fitch (Rock Prairie Rd. to SH 30)**	**57**
65	**FM 2154 @ UPRR/ Barron Rd**	**55**
66	**SH 6 @ BS6-R South**	**55**
67	**BS6-R (SH 21 to SH 6)**	**51**
68	**SH 6 @ BS6-R North**	**46**
69	**SH 6 @ Woodville**	**45**
70	**FM 2818 @ FM 1687**	**40**
71	**FM 2818 @ Mumford Road**	**40**
72	**FM 2818 @ Shiloh St./ Beck**	**40**
73	**Gulf Coast Strategic Highway**	
74	**New Frontage road (Luther & Holleman)**	

Appendix B

List of Prioritized Multimodal Transportation Issue Areas

The following section includes projects that have been identified as necessary future multimodal improvements, based on growth forecasts and the resulting anticipated increases in traffic over the next 25 years. The lists were completed with the cooperation of the Cities of Bryan and College Station, Brazos County, TAMU, TxDOT and The District. Only a few issue areas were developed into projects because of the limited anticipated funding expected.

Raw scores from the MPO Technical Advisory Committee, October 2009

	Issue Areas	Total	Project	Const. Cost	TPC
1	College Main in Bryan	216	sidewalks, bike lanes	$6M	$8M
2	University - Northgate Area	207	widen sidewalks, median, crosswalk enhancements	$2M	$3M
3	Texas Avenue - Bryan (1179 to N city limits)	204	sidewalks	$5M	$6M
4	Wellborn @ George Bush	203	multimodal improvements		
5	SH 6 Frontage Road Bike Improvements	191			
6	Wellborn @ Bell Tower	187	multimodal improvements		
7	FM 2154 Bicycle/ Pedestrian Improvements	185			
8	SH 6 / RPR Interchange	184			
9	South College bike ped (University to Downtown)	176			
10	FM 2818/ Southwood Dr Bike/ Ped Improvements	168			
11	CS Bike Loop Extension	167	multimodal improvements	$169,900	
12	Cavitt bike lanes	167			
13	Southwest Pkwy/ Welsh Ave	155			
14	FM 2818/ Longmire Dr bike/ Ped Improvements	147			
15	29th Street	146			
16	25th St. bike/ ped lanes	139			
17	G. Bush Dr/ Dexter Dr Signal Improvements	118			
18	SH 6 / Old Reliance Road	109			
19	BCS Passenger Rail Line	107			
20	Old Hearne Road	100			
21	SH 6 Bike/ Ped Bridge	84			
22	William Joel Bryan	49			

Appendix C

The Major Thoroughfare Plan graphically shows all planned roadway improvements and proposed new alignments, as adopted by the City Councils in the Cities of Bryan and College Station; as well as by the County Commissioners for Brazos County.